Geospatial One-Stop
Office of Management and Budget
Capital Asset Plan and Business Case (Exhibit 300)

The Geospatial One-Stop (GOS) is a part of the new OMB E-Government initiative to improve the effectiveness, efficiency, and customer service throughout society. Geospatial One-Stop will revolutionize E-Government by providing a geographic component for use in all Internet based E-Government activities across local, state, tribal and Federal government. The implementation of the Geospatial One-Stop in the near-term will:

- Provide standards and models for the geospatial framework data content;
- Provide an interactive index to existing geospatial data holdings at the Federal and non-Federal levels;
- Promote partnership among Federal, state, and local agencies for future geospatial data collections; and
- Provide an online access to geospatial data through the Geospatial One-Stop

Prepared and Submitted by the Geospatial One-Stop Project

January 27, 2003

PART I: CAPITAL ASSET PLAN AND BUSINESS CASE (All Assets)

Agency	**Multiple – Lead: Department of the Interior**
Bureau	**Multiple**
Account Title	
Account Identification Code	
Program Activity	
Name of Project	**Geospatial One-Stop**
Unique Project Identifier: (IT only)(See section 53)	**999-99-01-99-012-03**
Project Initiation Date	
Project Planned Completion Date	

This Project is: Initial Concept ____ Planning _**X**___ Full Acquisition ____ Steady State ____
Mixed Life Cycle ____

Project/useful segment is funded:	Incrementally	**X**	Fully	___
Was this project approved by OMB for previous Year Budget Cycle?	Yes	**X**	No	___
Did the Executive/Investment Review Committee approve funding for this project this year?	Yes	___	No	**X**
Did the CFO review the cost goal?	Yes	___	No	**X**
Did the Procurement Executive review the acquisition strategy?	Yes	___	No	**X**
Is this investment included in your agency's annual performance plan or multiple agency annual performance	Yes	**X**	No	___
Does the project support homeland security goals and objectives, i.e., 1) improve border and transportation security, 2) combat bio-terrorism, 3) enhance first responder programs; 4) improve information sharing to decrease response times for actions and improve the quality of decision making?	Yes	**X**	No	___
Is this project information technology? (See section 300.4 for definition)	Yes	**X**	No	___
For information technology projects only:				
a. Is this Project a Financial Management System? (see section 53.3 for a definition)	Yes	___	No	**X**
If so, does this project address a FFMIA compliance area?	Yes	___	No	___
If yes, which compliance area?				
b. Does this project implement electronic transactions or record keeping that is covered by the Government Paperwork Elimination Act (GPEA)?	Yes	**X**	No	___

If so, is it included in your GPEA plan (and does not yet provide an electronic option)?	Yes ___	No **X**
Does the project already provide an electronic option?	Yes ___	No **X**
c. Was a privacy impact assessment performed for this project?	Yes ___	No **X**
d. Was this project reviewed as part of the FY 2002 Government Information Security Reform Act review process?	Yes **X**	No ___
d.1 If yes, were any weaknesses found?	Yes ___	No **X**
d.2. Have the weaknesses been incorporated into the agency's corrective action plans?	Yes ___	No **X**
e. Has this project been identified as a national critical operation or asset by a Project Matrix review or other agency determination?	Yes **X**	No ___
e.1 If no, is this an agency mission critical or essential service, system, operation, or asset (such as those documented in the agency's COOP Plan), other than those identified above as national critical infrastructures?	Yes ___	No ___

Total (Multi-Agency) Geospatial One-Stop Spending Summary

SUMMARY OF SPENDING FOR PROJECT STAGES
(In Millions)
(Estimates for BY+1 and beyond are for planning purposes only and do not represent budget decisions)

	PY-1 and Earlier	PY 2002	CY 2003	BY 2004	BY+1 2005	BY+2 2006	BY+3 2007	BY+4& Beyond	Total
Planning:									
Budgetary Resources		7.175	4.455						11.63
Outlays		7.175	4.455						11.63
Acquisition :									
Budgetary Resources			4.0	9.955					13.955
Outlays			4.0	9.955					13.955
Total, sum of stages:									
Budgetary Resources		7.175	8.455	9.955					25.585
Outlays		7.175	8.455	9.955					25.585
Maintenance:								**	
Budgetary Resources					1.400	1.400	1.400	2.800	7
Outlays					1.400	1.400	1.400	2.800	7
Total, All Stages:									
Budgetary Resources		7.175	8.455	9.955	1.400	1.400	1.400	2.800	32.585
Outlays		7.175	8.455	9.955	1.400	1.400	1.400	2.800	32.585

Notes:
Costs have not been adjusted for inflation.
Planning phase costs include the development of NSDI Framework Data standards and the operational inventory of current and planned metadata records that comply with those standards.
Full acquisition costs include the development and deployment of data access and web portal including mapping services for NSDI Framework Data from Federal agencies.
Assumes all Budgetary Resources and Outlays equal. With setup of Project Office better information will be available
**Assuming a seven-year system life cycle. Maintenance based on a commercial –grade IT infrastructure.

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I.A. Project Description

Project Vision ***To spatially enable the delivery of government services***

The vision for the Geospatial One-Stop is to revolutionize e-Government by providing a geographic component for use in all e-Government activities across local, state, tribal and Federal government.

Goals

1. To provide fast, low cost, reliable access to Geospatial Data needed for Federal, State, and local government operations.

2. To facilitate G2G interactions needed for vertical missions such as Homeland Security

3. To facilitate the improved delivery of government services to the public.

4. To obtain multi-sector input for coordinating, developing and implementing geospatial (data and service) standards to create the consistency needed for interoperability and to stimulate market development of tools

Project Summary

Over the past few decades, the computer has made geographic information about the natural world and its inhabitants much more useful to government, businesses, and communities for making critical decisions. Geographic information systems (GIS) allow users to integrate, analyze, and manage information about geospatial data in ways never before possible. *Geospatial data* identifies the geographic location and characteristics of natural or constructed features and boundaries on the Earth.

The Geospatial One-Stop (GOS) project serves the broader intergovernmental community and the Department of the Interior is the Managing Partner. The project will make it faster, easier and more economical for users of geospatial data to get access to the data and carry out their business activities. The data will become a vital part of the National Spatial Data Infrastructure (NSDI). Interoperability tools, which allow different information communities to share data, will be utilized to migrate current data to the National NSDI Framework Data standards. The project will test and evaluate a web portal. Based on the results, a comprehensive web portal will be developed and deployed for "one-stop" access to geospatial data. After initial deployment and testing of the comprehensive web portal, reusable, commercial replication services (24X7, trusted data services) will be required.

The implementation of the Geospatial One-Stop will:

- Provide standards and models for the content of a geospatial data framework;
- Provide an interactive index to geospatial data holdings at the Federal and non-Federal levels;
- Promote partnerships among Federal, state, and local agencies for planned geospatial data collections; and
- Provide an online access portal to geospatial data.

The Geospatial One-Stop builds upon existing capabilities to accelerate the development of the NSDI, technology, policies, and standards that support "one-stop" access to the Federal government's geospatial data assets. It will benefit all spatial data customers including Federal, state, local, and other governments, as well as private citizens, by

providing a common, consistent source of geospatial data. It will save all parties money by providing a market for data acquisition partnership opportunities and by making existing data more accessible. By providing easier and faster access to data required for government decision-making, it will enhance decision support systems and delivery of services to the public.

This initiative is one of the 24 e-Government initiatives selected by the President's Management Council (PMC). It will significantly enhance the implementation of e-government by enabling geospatial data to be more accessible and usable.

This project will involve the work of a number of different Federal agencies. Each will contribute resources in the form of funding, personnel, or both. A funding strategy, which includes the identification of the level of contribution from the respective agencies, is in Part I.H.3.

1. What assumptions are made about this project and why?

The following assumptions have been made for the Geospatial One-Stop project:

1. It is inherently an intergovernmental project with the federal government ultimately a junior partner.
2. Does not include the costs associated with data collection or salaries of individuals responsible for collecting the data. Includes new costs, above and beyond what is already being spent to implement framework data standards.
3. Will build upon ongoing NSDI activities, existing standards development work and agency programs.
4. Geospatial One-Stop will help link e-government, Homeland Security and agency programs.
5. Will encompass only those activities that can be completed in 18-24 months.
6. Modest amounts of additional funding will be available.
7. DOI Passback guidance has been given to agencies to use relevant FDGC standards and participate financially in this project as indicated in Part III, Section B.
8. Investments in sharable spatial data activities can be identified, leveraged, and aligned.
9. Member agencies will continue to actively support and participate in FGDC activities.

2. Provide any other supporting information derived from research, interviews, and other documentation.

Many studies reveal that about 80-90% of all government information has a geographic or spatial data component, meaning it can be tied to a specific place (for example: area code, latitude and longitude, street address, zip code). In 1998, the National Academy of Public Administration (NAPA) estimated that $3.56 trillion is spent annually in the economic sector of the U.S. economy where spatial data is of importance. Today there is a wealth of geographic data available from Federal, state, county, local and tribal governments, academic institutions, and private sector organizations. Local governments often possess the most recent and highest resolution geographic data. However, it is collected to serve specific missions and business processes in different formats and standards, and either poorly documented or undiscoverable. The result is inefficient use of resources, potential duplication, inconsistency, incompatibility, and the inability to maximize the value of data resources.

Geospatial One-Stop seeks to improve the use of standards, partnerships, and the clearinghouse network, across all levels of government and the private sector. The International Organization for Standardization (ISO) defines a *standard* as documented agreements containing technical specifications or other precise criteria to be used consistently as rules, guidelines, or definitions of characteristics to ensure that materials, products, processes, or services are fit for their purposes. A *clearinghouse* is a distributed network of data producers, managers, and users linked electronically over the Internet. Through a clearinghouse, users can draw on a single interface to search and access data. A Geospatial One-Stop Portal will be developed and implemented based on open interoperability

standards, allowing seamless access to geospatial information. This concept of interoperability will be implemented on a scale never precedent before allowing additional providers to server up data through open common interfaces.

Applications ranging from homeland security, emergency management, and disaster response to economic development, natural resource stewardship, public safety, transportation planning, management of invasive species, zoning decisions, and disease management depend upon accurate and timely geographic data. *Geographic data themes* are electronic records and coordinates for a topic or subject, such as elevation, vegetation, or hydrography. While specific applications of geographic data vary greatly, users have a recurring need for seven basic themes of data that are the foundation or framework for almost all applications. *Framework data* are characterized by a minimal number of attributes needed to identify and describe features such that they can form the foundation or framework of many applications. Each of the seven framework data themes is presented below with the lead agency, as denoted in the draft revision of OMB Circular A-16, dated August 1, 2002. These lead agencies will be active partners of the Geospatial One-Stop project.

- Digital orthoimagery (DOI – USGS): This dataset contains geo-referenced images of the Earth's surface, collected by a sensor. Digital orthoimages have the geometric characteristics of a map and image qualities of a photograph.
- Cadastral data (DOI – BLM): This dataset describe the geographic extent of past, current, and future right, title, and interest in real property, and the framework to support the description of that geographic extent. The geographic extent includes survey and description frameworks such as the Public Land Survey System, as well as parcel-by-parcel surveys and descriptions. In addition, this data set covers the offshore cadastre. The Offshore Cadastre is the land management system used on the Outer Continental Shelf. It extends from the baseline to the extent of United States jurisdiction.
- Geodetic control (DOC – NGS): Geodetic control provides a common reference system for establishing coordinates for all geographic data.
- Elevation (DOI – USGS): This dataset contains geo-referenced digital representations of terrestrial and bathymetric surfaces, natural or manmade, which describe vertical position above or below a datum surface.
- Hydrography (DOI – USGS): This dataset includes surface water features such as lakes, ponds, streams, rivers, canals, oceans, and coastlines.
- Transportation (DOT – BTS): This dataset is used to model the geographic locations, interconnectedness, and characteristics of the transportation system within the United States. The transportation system includes both physical and non-physical components representing all modes of travel that allow the movement of goods and people between locations.
- Government units (DOC – Census): This dataset describes, by a consistent set of rules and semantic definitions, the boundaries of federal, state, local, and tribal governments as reported/certified to the U.S. Census Bureau by responsible officials of each government for purposes of reporting the Nation's official statistics.

Federal agencies are relying more on state and local partners, and the private sector to fulfill their geospatial data needs because these often have the most current and finest resolution data. At the same time, state and local governments, and the private sector are clamoring for Federal leadership to unify data life cycle processes, and address the institutional and financial barriers to align spatial data efforts. The Geospatial One-Stop Project is well positioned to provide this leadership. With in the federal community the FGDC leads and supports the NSDI strategy and national spatial data policy development and is comprised of members from 18 executive-level agencies, including the:

- US Department of Agriculture (USDA)
- Department of Commerce (DOC)

- Department of Defense (DOD)
- Department of Energy (DOE)
- Department of Health and Human Services (HHS)
- Department of Housing and Urban Development (HUD)
- Department of Interior (DOI)
- Department of Justice (DOJ)
- Department of State (DOS)
- Department of Transportation (DOT)
- Environmental Protection Agency (EPA)
- Federal Emergency Management Agency
- General Services Agency (GSA)
- Library of Congress (LOC)
- National Archives and Records Administration (NARA)
- National Aeronautics and Space Administration (NASA)
- National Science Foundation (NSF)
- Tennessee Valley Authority (TVA)

The FGDC also engages a growing network of non-federal stakeholders for addressing geospatial data needs. National stakeholders include:

- GeoData Alliance (GDA)
- International City/County Managers Association (ICMA)
- Intertribal GIS Council (IGC)
- National States Geographic Information Council (NSGIC)
- National Association of Counties (NACo)
- National League of Cities (NLC)
- Open GIS Consortium (OGC)
- University Consortium for Geographic Information Sciences (UCGIS)
- Western Governors Association (WGA)
- Over 30 Individual State GIS Councils

Each of these organizations has played an important role in working strategically with the FGDC in developing the NSDI. Geospatial One-Stop will solicit, support, and leverage the interests, capabilities, and efforts of participants to implement national standards that will meet the needs of and be widely accepted by the geospatial community. The Geospatial One-Stop project is provided policy direction by an intergovernmental Board of Directors chaired by the Interior Department, and the project is managed by an Executive Director. Congruent Geospatial One-Stop standards are defined consistent with emerging international geographic information standards (being developed by ISO Technical Committee 211 (TC211)). The FDGC will serve as the conduit for state and local government, and private sector requirements in the work of the national voluntary consensus bodies for geographic information (as defined by OMB Circular A-119).

The Geospatial One-Stop project will embrace the development and implementation of ANSI and ISO standards. This project is an effort to further implement the ANSI National Standards Strategy for geospatial data, and forge stronger relationships with the National Institute of Standards and Technology (NIST). According to Executive Order 12906, Federal agencies are required to make geospatial data comply with existing FGDC-endorsed standards and make that data available to the public.

The Geospatial One-Stop project will result in the publication and adoption of specific framework data models promoting interoperability of framework data themes. At a minimum within the federal establishment, these data models will support consistent data collection among framework data partners. Geospatial One-Stop will facilitate

community participation in the evaluation of relevant standards. Individual agencies will be responsible for providing these standard geographic data services online.

Geospatial One-Stop will improve access to standardized framework data held by governments at all levels, academic institutions, private sector entities, and other organizations. Establishing reliable and standardized framework data services on the web will foster the production of virtually seamless, nationally consistent geographic information that is collected once, and shared many times. In so doing, it will enable organizations at the federal, state, and local levels to share production and maintenance of data that satisfy common data needs, and serve as a foundation or infrastructure for other e-government initiatives. Furthermore, the Geospatial One-Stop will establish the practices and techniques that will be used as the building blocks for additional data themes.

Geospatial One-Stop will inventory the Federal government's existing (legacy) framework data. It will also promote such inventories in the non-Federal sectors. These data will be accessible through the Geospatial One-Stop Portal providing a "one-stop" to identify current spatial data held by, or on behalf of, Federal and non-Federal agencies. The development of a searchable database, using FGDC metadata and the NSDI Clearinghouse network, will enable governments at all levels, and the private sector, to identify agency data collection plans through a web portal. This initiative will also encourage state and local governments to identify at this portal their data collection plans. *Metadata* is information about data, such as content, source, vintage, accuracy, condition, projection, responsible party, contact telephone number, method of collection, and other characteristics or descriptions. Reliable metadata, structured in a standardized manner, are essential to enabling geospatial data to be used appropriately, and to ensure that any resulting analysis is credible. Metadata can be used to facilitate the search for and access of data sets catalogued within a clearinghouse. This will allow state and local governments, many of whom are aggressively using the NSDI Clearinghouse network, to coordinate data acquisition strategies with the Federal government, and to manage their data activities more efficiently and effectively.

The Geospatial One-Stop project supports the overall plan of e-government and existing principles of the NSDI established in Executive Order 12906 and OMB Circular A-16, OMB Circular A-119, and Public law 104-113, the National Technology Transfer Advancement Act. Furthermore, it addresses long-standing OMB objectives to improve data quality, and reduce burden by maximizing the benefits of technology.

I.B. Justification (All Assets)

1. How does this investment support your agency's mission and strategic goals and objectives?

Geospatial One-Stop focuses on the Presidential priority to expand and improve the use of e-government by making geospatial data available to the Federal, state, local, and other governments, and the public. The purpose is to enable agencies to fulfill their missions and goals more efficiently and effectively. This multi-agency initiative is established under and aligned with various public law and policy provisions: Information Technology Management Reform Act (ITMRA), Government Performance Results Act (GPRA), Paperwork Reduction Act (PRA), Intergovernmental Cooperation Act, Executive Order 12906, and it is also aligned with OMB Circular A-16, Public Law 44 USC 3511, OMB Circular A-130, OMB Circular A-119, and Public law 104-113, OMB Memorandum 98-5, and a variety of other policies relating to the management of government information.

2. How does it support the strategic goals from the President's Management Agenda?

Geospatial One-Stop directly supports the President's Management Agenda by providing a geospatial component for government and is one of the 24 Quicksilver initiatives. This initiative is one of the 24 e-Government initiatives selected by the President's Management Council (PMC). It will significantly enhance the implementation of e-government by enabling geospatial data to be more accessible and usable.

3. Are there any alternative sources in the public or private sectors that could perform this function?

No, a balance of public and private sector capabilities and networks will be used to create the enabling mechanisms of the Geospatial One-Stop project. For example, there are private sector initiatives such as the Geography Network of ESRI, which may provide functionality for the Geospatial One-Stop. It is expected that these private sector efforts will embrace the appropriate standards because of their general appeal in the user community, and become vital to the NSDI Clearinghouse network and Geospatial One-Stop. Additionally, any technology components of the Geospatial One-Stop project will follow specifications and protocols for open and interoperable technologies.

4. If so, explain why your agency did not select one of these alternatives.

NA

5. Who are the customers for this project?

Government geospatial data users such as land and resource managers, first responders, scientists and EMS organizations, and decision makers in the Federal, State, local and tribal governments, and the average citizen who will benefit from improved government services, are the primary customers. These users benefit directly from improved geospatial data, standardized, simplified web enabled GIS tools, and streamlined geospatially enabled business processes.

6. Who are the stakeholders of this project?

With in the federal community the Geospatial One-Stop supports the NSDI strategy and national spatial data policy development that its 18 executive-level agencies, including the:

- US Department of Agriculture (USDA)
- Department of Commerce (DOC)
- Department of Defense (DOD)
- Department of Energy (DOE)
- Department of Health and Human Services (HHS)
- Department of Housing and Urban Development (HUD)
- Department of Interior (DOI)
- Department of Justice (DOJ)
- Department of State (DOS)
- Department of Transportation (DOT)
- Environmental Protection Agency (EPA)
- Federal Emergency Management Agency
- General Services Agency (GSA)
- Library of Congress (LOC)
- National Archives and Records Administration (NARA)
- National Aeronautics and Space Administration (NASA)
- National Science Foundation (NSF)
- Tennessee Valley Authority (TVA)

The Geospatial One-Stop project through its Board of Directors, FGDC and the many Federal Partners that engage a growing network of non-federal stakeholders for addressing geospatial data needs. National stakeholders include:

- GeoData Alliance (GDA)
- International City/County Managers Association (ICMA)
- Intertribal GIS Council (IGC)
- National States Geographic Information Council (NSGIC)
- National Association of Counties (NACo)
- National League of Cities (NLC)
- Open GIS Consortium (OGC)
- University Consortium for Geographic Information Sciences (UCGIS)
- Western Governors Association (WGA)
- Over 30 Individual State GIS Councils
- Private Companies thru STIA and GITA

7. If this is a multi-agency initiative, identify the agencies and organizations affected by this initiative.

The following agencies have specific responsibilities for Framework themes of data under OMB Circular A-16 and will be lead partners of the Geospatial One-Stop project:

- Department of the Interior (DOI)
- United States Geological Survey (USGS)
- Bureau of Land Management (BLM)
- Department of Commerce (DOC)
- United States Census Bureau (Census Bureau)
- National Oceanic and Atmospheric Administration (NOAA)
- National Ocean Service (NOS)
- National Geodetic Survey (NGS)
- Department of Transportation (DOT)
- Bureau of Transportation Statistics (BTS)

The following FGDC agencies have significant geospatial data programs and responsibilities under A-16 and are also partners in this project with financial responsibilities identified in the Exhibit 300:

- National Aeronautics and Space Administration (NASA)
- Environmental Protection Agency (EPA)
- Federal Emergency Management Agency (FEMA)
- United States Department of Agriculture (USDA) – Natural Resources Conservation Service (NRCS), Farm Services Agency (FSA), Forest Service (FS)
- Department of Defense (DOD) – National Imagery and Mapping Agency (NIMA) – US Army Corps of Engineers (USACE)

In carrying out the Geospatial One-Stop project, other partnership and consortiums, such as National Digital Elevation Program (NDEP) and National Digital Ortho-photo Program (NDOP) will also serve as active partners.

8. How will this investment reduce costs or improve efficiencies?

In 1993, OMB performed a data call in which it estimated that $4.1 billion was spent annually, at the federal level, on collection and management of geographically referenced data. In addition, state and local governments are estimated to spend twice that of the Federal government on collection and management of geographic referenced data. The Geospatial One-Stop project will reduce the costs associated with the management of geospatial data and improve the

efficiencies by which it is acquired, accessed, and used across multiple Federal, state, and local governments, and the public sector.
Geospatial One-Stop will accelerate the cost efficiencies while reducing duplication. Geospatial services can be better organized, built, and funded in light of local needs, capacities, and supplemental resources. Complex problems, adaptive management, and innovative regulatory and public-private partnerships require a common set of practices. A shared process of all relevant factors, stakeholders, and local assets and programs capable of being leveraged in near real-time, lets agencies avoid duplication, waste, and gaps. The Geospatial One-Stop will:

- Increase consistency, quality, reliability, and reuse of geospatial data.
- Expand access to standard data more rapidly and at less cost.
- Provide consistent and accessible nationwide data to prioritize, implement, and adapt federal and state programs for local benefit.
- Improve efficiency of coordinating intergovernmental and private sector efforts.
- Promotes partnerships among federal, state, local, private, tribal, and academic constituents.
- Provide more accountable performance and results-oriented management.
- Improve citizen involvement in the digital democracy, thereby improving program accountability and performance.
- Support demand for interoperability and functionality in technologies and drives domestic and international sales.

9. List all other assets that interface with this asset. Have these assets been re-engineered as part of this project? Yes____, No__X__.

Geospatial assets, such as interoperable standards, are being developed. We believe there are many assets across multiple agencies that will need a migration plan to interface with OMB policy guidance associated with Geospatial One-Stop. Further work is needed to assess these numerous cross-agency assets. Assets include but are not limited to: The National Mapping Program, the National Spatial Reference System, the National Geologic Mapping Program, the National Wetlands Inventory, the National Cooperative Soil Survey Program, the National Public Land Survey System, Geographic Coordinate Database, the National Oceanic and Atmospheric Administration (NOAA) nautical charting and nautical data collection and information programs, the U.S. Army Corps of Engineers (USACE) inland waterway charting program, the Offshore Minerals Program, the NASA's Earth Science Enterprise, FEMA's Flood Plain Mapping program and other federal activities that involve national surveying, mapping, remote sensing, spatially referenced statistical data, and Global Positioning System (GPS).

I.C. Performance Goals and Measures (All Assets)

Fiscal Year	Strategic Goal(s) Supported	Existing Baseline	Planned Performance Improvement Goal	Actual Performance Improvement Results	Planned Performance Metric	Actual Performance Metric Results
2002	All Project Vision Goals (1-4 from Section I.A in the Exhibit 300) were supported. Primary Project Vision Goal Supported this FY = #4: 'To obtain multi-sector input - for coordinating, developing and implementing geospatial (data and service) standards to create the consistency needed for interoperability.'	Existing standards have been developed primarily in the Federal Arena with minimal input from other governmental and private sectors Geospatial portals have been based on independent agency missions not using open-based standards for interoperability but more mission	Broaden State, Local and Tribal input in the overall project guidance, and each of its modules. Performance Goals: 1) Deploy Standards - Develop draft of 'National' Framework Data Standards and models for content of geospatial data. Demonstrate Transportation Standard 2) Reduce Duplication of Data Acquisition and redundant, non standard data collection	Established an Intergovernmental Board of Directors with 2/3 of the vote held by State, Local and Tribal representatives. 1) Established Standards Development and Review Teams consisting of approx. 500 members across Federal, State, Local and Tribal sectors and initiated development of Draft Standards Transportation Draft Standard developed in September 2002. 2) Development of guidance on planned metadata posting was initiated. Guidance scheduled to go out by December 2003	Provide an avenue to influence overall project guidance and direction to those entities that steward 2/3 of the national geospatial data. 1) Achieve at least 30% Non-Federal participation in the development of the National Framework Data Standards and deliver all initial draft standards for review. Trans. Road Draft Standard data to be stood up in March 2003 2) Original agency posting of data holdings and planned acquisition estimated to be complete February 2003.	Achieved results at project management level of the project through the establishment of the Board of Directors, in addition to establishing intergovernmental teams for standards and portal development. 1) The project as a whole has achieved approximately 49 % Non-Federal participation in the Standards effort this Fiscal Year. Increased participation efforts will continue through 2003. Draft Standards for Public Review were delayed until 2nd quarter of FY03 in order to insure broader participation. Trans. Road Draft Standard Data on schedule to be stood up in March 2003. 2) Agencies are posting data to NSDI metadata clearinghouses, and planned metadata holdings are due to be completed by the end of February 2003.

Fiscal Year	Strategic Goal(s) Supported	Existing Baseline	Planned Performance Improvement Goal	Actual Performance Improvement Results	Planned Performance Metric	Actual Performance Metric Results
		oriented solutions	3) Develop Web Portal based on open interoperability standards - Demonstrate Transportation Results through portal development	3) Initiated Portal effort for testing data integration, using existing standards, to run in parallel with new standards effort	3) Portal effort initiated in September 2003	3) Portal effort initiated in September 2003. Development of RFQ through OGC initiated.
			4) Increase Opportunities for Interagency Geospatial Data Partnerships	4) Leveraged Interagency activities supporting NSDI efforts, including I-Teams and other federal partner activities such as the National Map and the Homeland Security working group.	4) Identify, incorporate, and utilize existing processes to increase interagency partnerships. Increase State I-Team participation by 50%. Provide initial mechanism to encourage State, Local and Tribal implementation of serving data	4) Collaboration on Requirements Analysis and Data Holdings survey established between GOS, CIPI, and the FEMA-NIMA 'Geospatial Preparedness' Initiative State I-Team participation increased by over 50% from 23 to 46 states in FY 2002. Submitted OMB Budget request for a $1.5M grant program to support GOS implementation at State, Local and Tribal levels
2003	All Project Vision Goals (1-4) supported. Primary Project Vision Goal Supported		1) Deploy Standards - Publish ANSI Standards for all Framework themes by end of September 2003.		1) Acceptance of all 7 Theme Standards by ANSI and FGDC by September 2003. Progress tracked by accomplishment of scheduled milestones.	

Fiscal Year	Strategic Goal(s) Supported	Existing Baseline	Planned Performance Improvement Goal	Actual Performance Improvement Results	Planned Performance Metric	Actual Performance Metric Results
	for this FY = #1: '1) Provide fast, low cost, reliable access to Geospatial Data needed for Federal, State, and local government operations.'		Demonstrate Transportation Standards based data March 2003 2) Reduce Duplication of Data Acquisition and redundant, non standard data collection – Create a Geospatial Acquisition Market Place where All Federal Geospatial Data holdings and Planned Acquisitions (greater than $1M) will be posted to at the end of Februray2003 3) Develop Web Portal based on open standards – Deploy 'Beta' version of Portal in May 2003 with initial capabilities. Incorporate new standards as		2) Achieve and validate implementation with planned data acquisition posting by May 2003. Create geographically enabled, visual, web based tool for identifying planned data acquisitions to work in conjunction with the Beta Portal Effort. Estimated completion end of May 2003. 3) Deploy 'Beta' version of Portal in May 2003 using Framework Themes. Incorporate public comments and initial enhancements by the end of September 2003	

Fiscal Year	Strategic Goal(s) Supported	Existing Baseline	Planned Performance Improvement Goal	Actual Performance Improvement Results	Planned Performance Metric	Actual Performance Metric Results
			available. Stimulate market development tools 4) Increase Opportunities for Interagency Geospatial Data Partnerships – Develop method to identify partnership opportunities and track results through the planned acquisition market place.		4) Quantify value of total planned acquisitions available for partnership in FY03 and realized savings by state.	
2004	All Project Vision Goals (1-4) supported. Primary Project Vision Goal Supported in this FY= #2: 'Facilitate G2G interactions		1) Deploy Standards - Facilitate the implementation of Standards at Federal, State and Local levels. 2) Reduce Duplication of Data Acquisition and redundant, non standard data collection –		1) Quantify success of implementation efforts by each sector through survey methods and realized portal functionality. 2) Quantify savings, by State, and theme, achieved in avoiding redundant, non-standard data collection through the	

Fiscal Year	Strategic Goal(s) Supported	Existing Baseline	Planned Performance Improvement Goal	Actual Performance Improvement Results	Planned Performance Metric	Actual Performance Metric Results
	needed for vertical missions'		Enhance capabilities of Geospatial Acquisition Market Place. 3) Develop Web Portal based on open standards – Enhance Open Standards Based Portal capabilities. Deploy Version 1 of Portal using new ANSI standards in May 2004 with enhanced web feature services. Stimulate market development tools 4) Increase Opportunities for Interagency Geospatial Data Partnerships – Develop method to identify partnership opportunities and track results through the		Geospatial Market Place. 3) Deploy Version 1 of Open Standards Portal in May. Incorporate public comments and continue enhancements by the end of September 2004. Quantify use of portal in G2G interactions through web site registration for access to capabilities by other portals and monitor demand on system resources. 4) Quantify use of Geospatial Acquisition Market Place and total dollars saved through partnerships.	

Fiscal Year	Strategic Goal(s) Supported	Existing Baseline	Planned Performance Improvement Goal	Actual Performance Improvement Results	Planned Performance Metric	Actual Performance Metric Results
			planned acquisition market place.			
2005	All (1-4) Project Vision Goals supported. Primary Project Vision Goal Supported # 3&4: 3) Improve delivery of government services 4) Obtain multi-sector input needed for interoperability		1) Deploy Standards - 80% relevant Federal, and 30% of state, and local entities adopt the standards 2) Reduce Duplication of Data Acquisition and redundant, non standard data collection – Enhance capabilities of Geospatial Acquisition Market Place. 3) Develop Web Portal based on open standards – Enhance Open Standards Based Portal capabilities. Deploy Version 2 of Portal with		1) Quantify Federal, State, Local, and Tribal participation through State survey methods and portal functionality. 2) Quantify savings achieved, by State and theme, in avoiding redundant, non-standard data collection through the Geospatial Market Place. 3) Quantify use of portal in G2G interactions through web site registration for access to capabilities by other portals. Monitor demand on system resources. 4) Quantify use of Geospatial Acquisition Market Place and total	

Fiscal Year	Strategic Goal(s) Supported	Existing Baseline	Planned Performance Improvement Goal	Actual Performance Improvement Results	Planned Performance Metric	Actual Performance Metric Results
			enhanced web feature services. Stimulate market development tools 4) Increase Opportunities for Interagency Geospatial Data Partnerships –		dollars saved through partnerships.	
2006	All Project Vision Goals (1-4) supported.		All relevant Federal; 60% State; 40% Local and Tribal; governments will comply with the goals and standards associated with Geospatial One-Stop by serving up their framework data using national standards. Estimate 90% adoption by 2010.		Same as above	

Additional quantifiable performance goals and measures will be established following finalization of the E-Government Strategic Plans, and further augmented during the planned needs assessment and requirements analysis phase of the project in FY 03.

Overall performance goals for the Geospatial One-Stop Initiative are:

- Completed and deployed standards for framework data themes;
- Overlapping data collection efforts are reduced as geospatial data activities are published;
- Web portal implementation with standardized metadata;
- Eliminate redundant, non-standard data collection; and
- Proliferation of interagency and intergovernmental data acquisition partnerships.

The following critical success factors have been identified as integral to meeting performance goals:

- Cooperation is received from all relevant federal, state, and local entities to develop standards and to participate in interagency and intergovernmental data acquisition partnerships.
- All relevant Federal, state, and local entities adopt the standards to help eliminate redundant, non-standard data collection.
- All relevant geospatial data, as well as planned Federal data collection, is incorporated and updated into the NSDI Clearinghouse network including a significant documentation of non-Federal data collection plans;
- Interoperability tools are utilized to leverage existing business processes;
- Project processes and systems are developed with flexible approaches to account for the diverse and changing roles of various stakeholders;
- Joint project management office with representatives from partners and stakeholders;
- Full funding is allocated; and
- Full participation from OMB.
- Development and implementation of an architecture
- Federal Partners stand up servers and web services.

I.D. Program Management [All Assets]

1. Is there a program manager assigned to the project? If so, what is his/her name? Geospatial One-Stop Executive Director – (Pending – Position anticipated to be filled by October 2002) **Acting Executive Director is Myra Bambacus**	Yes		No	**X**
2. Is there a contracting officer assigned to the project? If so, what is his/her name? Pending	Yes		No	**X**
3. Is there an Integrated Project Team?	Yes	**X**	No	

3.A. If so, list the skill set represented. Subject matter experts in policy, mapping, GIS, IT, open standards development, and portal development from multiple Federal, State, Local and Tribal governments, and the private sector.

3. Is there a sponsor/owner? **DOI, Deputy Assistant Secretary for Performance and Management – Scott Cameron**	Yes	**X**	No	

A Board of Directors exists for the Geospatial One-Stop project. It is intergovernmental and it includes representatives from partner organizations. It will guide the overall project.

The Project Management Team:

Will consist of personnel who are working full time or substantially on the Geospatial One-Stop Initiative and will include:

GOS Project Management Team	
Title	**Skill Set**
Project Sponsor/Owner Scott Cameron	DOI, Deputy Assistant Secretary for Performance and Management
Board of Directors	Intergovernmental Board – Federal, State, Local and Tribal Constituent Representation and Outreach to support overall project guidance
Executive Director/Project Manager Myra Bambacus (Acting)	NASA, Program Manager, Geospatial Interoperability Program Office
Deputy Project Manager TBD	Assist Project manager
Project Office Milo Robinson, FGDC Rob Dollison, Orkand Corp. Kathrine Nowack, One-Stop	Project Management Support Interagency Finance Coordination
Module 1 Manager- Christine Clarke, USDA/NRCS	Standards Development and Modeling Manager
Module 2 & 3 Manager – Sharon Shin, FGDC Metadata Coordinator	Data Holdings and Planned Acquisition, Metadata Manager.
Module 4&5 Manager – Jeff de La Beaujardiere	Portal Manager
Outreach Coordinator Leslie Wollack, NASA	Federal, State, Local & Tribal Outreach Coordination

I.E. Alternatives Analysis [All Assets]

1. Describe the alternative solutions you considered for accomplishing the agency strategic goals that this project was expected to address. Describe the results of the feasibility/performance/benefits analysis. Provide comparisons of the returns (financial and other) for each alternative.

Alternative	Description

Alternative 1 – Status Quo	The status quo revolves around compliance with project goals subject to agency requirements and priorities over an extended period of time
Alternative 2 – Proposed	The Geospatial One-Stop will accelerate the implementation of OMB Circular A-16 and Executive Order 12906, in support of e-government requirements.
Alternative 3 – Outsource to single vendor	The U.S. Federal Government will choose a single vendor to provide a comprehensive solution for the Geospatial One-Stop

Background

Three alternatives have been identified: the status quo and the Geospatial One-Stop. Both alternatives include a mix of contractor, private sector, and government performance requirements, and require partnerships, interaction, and active involvement of other levels of government, private sector, and others with Federal agencies. This joint participation is a fundamental component of both alternatives. Although other alternatives were considered, no other feasible alternatives were documented within the scope of this analysis given the Federal policy mandates encompassed by OMB Circular A-16 and Executive Order 12906.

Alternative 1 – Status Quo

Description: The status quo revolves around compliance with project goals subject to agency requirements and priorities over an extended period of time. In general, the current practices include:

- Developing and implementing NSDI Framework Standards as time permits.
- Inventorying and documenting NSDI Framework Data on an ad-hoc basis.
- Inadequate documentation of data management plans for Federal agencies.
- Establishing web mapping and data services as time and resources permit.
- Transitioning the NSDI Clearinghouse network that provides limited access to geospatial data and services from participating Federal agencies to a more robust portal as resources permit.

Benefits:

- Provides individual NSDI Framework Standards.
- Requires little or no organizational change.
- Reduces risk – efforts will proceed with known limitations.
- Incurs no additional cost.

Limitations	Consequences
Has yet to provide a full suite of integrated and implementable NSDI Framework Data Standards	Continued costly, inefficient, redundant, agency-specific data collection where there are no consistent data content standards
Does not provide for seamless coverage of NSDI Framework nationally	Inadequate data sharing across federal, state, and local organizational boundaries
Provide data documentation (metadata) for only a portion of the NSDI Framework Data	Stakeholders lack “one-stop” for data access
Has not provided plans from Federal agencies and does not take advantage of many data collection collaborative opportunities that may	Less leveraging of partnerships and stakeholder activities

Limitations	Consequences
exist	
Does not explore and define the full potential of the capability that can be built upon the current NSDI Clearinghouse network	Slower implementation of web mapping services
Does not take advantage of e-government needs for geospatial data	Disparate use of geospatial data

Alternative 2 – Proposed Alternative

Description: The Geospatial One-Stop will accelerate the implementation of OMB Circular A-16 and Executive Order 12906, in support of e-government requirements. Proposed components include:

- Development and implementation of standards for seven NSDI Framework Data themes.
- Inventory and documentation of all Federal agency NSDI Framework Data themes.
- Documentation of data collection plans for Federal agencies and encourage similar non-Federal documentation.
- Establishment of web mapping and online data services for all NSDI Framework Data themes to meet general requirements of government and citizen users.
- Implementation of a web portal to the NSDI Clearinghouse network that provides access to geospatial data, data applications, programs and products from all Federal agencies and incorporate similar non-Federal information.

Benefits	Results
Will provide a full suite of integrated NSDI Framework Data standards consistent with ISO geographic information standards in a timely manner	Framework for creation of uniform, common data that is easily shared, and all stakeholders "buy-in" to the open standards process
Will provide metadata records for NSDI Framework Data available from the Federal government and other organizations	Partners and stakeholders will know what data exists, which should result in reduced duplication of data collection at the Federal state, and local levels
Will provide plans from all Federal agencies and other organizations, and the opportunity to establish data collection collaborative projects that will improve effectiveness, efficiency, and reduce duplication	Partners and stakeholders will know what data collection plans exist, which should provide opportunities for collaboration and partnerships
Will define the full potential of the capability that can be built upon the current NSDI Clearinghouse network	Makes possible enhanced use of existing access and discovery infrastructure
Will provide a web portal for geospatial resources	Allows "one-stop" access for geospatial data and all stakeholders and vendors perceive a "level playing field"
Will build upon existing web mapping capability and fully engage private sector	Increases web mapping functionality and visualization and leverages the benefits of direct

Benefits	Results
partners in an open systems test-bed environment	competition on a base of open standards
Best mix of benefits and cost	Facilitates use of e-government practices to streamline current processes and reduce future costs

Limitations:

- Will require concerted attention and commitment of time and resources of Federal agencies, the FGDC, and support from many non-Federal partners.

Alternative 3 – Outsource to single vendor

Description: The U.S. Federal Government will choose a single vendor to provide a comprehensive solution for the Geospatial One-Stop. Proposed components include:

- The selected vendor will manage the standards-setting process for seven NSDI Framework Data themes.
- Inventory and documentation of all Federal agency NSDI Framework Data themes.
- Documentation of data collection plans for Federal agencies and encourage similar non-Federal documentation.
- The selected vendor will choose web mapping and online data services for all NSDI Framework Data themes to meet general requirements of government and citizen users.
- The selected vendor will provide a web portal as an extension to the NSDI Clearinghouse network that provides access to data applications, programs and products from all Federal agencies and incorporate similar non-Federal information.

Benefits	Results
Will provide a full suite of integrated NSDI Framework Data standards in a timely manner, although not necessarily consistent with open geographic information standards	Framework for creation of uniform, common data that is easily shared, but many stakeholders would not "buy-in"
Will provide metadata records for NSDI Framework Data available from the Federal government and other organizations	Partners and stakeholders will know what data exists, which should result in reduced duplication of data collection at the Federal state, and local levels
Will provide plans from all Federal agencies and other organizations, and the opportunity to establish data collection collaborative projects that will improve effectiveness, efficiency, and reduce duplication	Partners and stakeholders will know what data collection plans exist, which should provide opportunities for collaboration and partnerships
Will define a capability that could be built upon the current NSDI Clearinghouse network, but without its foundation of open standards	Makes possible enhanced use of existing access and discovery infrastructure
Will provide a web portal for geospatial	Allows "one-stop" access for geospatial data,

Benefits	Results
resources	but there are distinct "winners and losers" among the stakeholders
Might build upon existing web mapping capability but only engage a fraction of private sector partners	Increases web mapping functionality and visualization, but few vendors would be involved
Best mix of benefits and cost	Facilitates use of e-government practices to streamline current processes and reduce future costs

Limitations:

- Would be contrary to OMB Circular A-16 and Executive Order 12906
- Would result in a solution that is more proprietary than open standards-based, and thereby constrain the pursuit of interoperability across vendors and over time
- Will require concerted attention and commitment of time and resources of Federal agencies and the FGDC
- Support from non-Federal partners would be required but difficult to marshal

2. Summarize the results of your life-cycle cost analysis performed for each investment and the underlying assumptions.

A contract initiated in FY2002 will be in place in the first quarter of FY 2003 to support the financial analysis of the project and will include developing Life-Cycle costs, ROI analysis and assist in better estimating the Net Present Value.

Cost Elements	Alternative 1	Alternative 2	Alternative 3
Element 1 –			
Element 2 -			
Element 3 –			
Element 4 -			
Element 5 –			
Total			

A detailed life cycle cost analysis for each agency's investment has not been performed. It has been estimated by the FGDC that maintenance costs for the Geospatial One-Stop will be $1.4 million per year for the life cycle of the project (five years). It will be the ultimate responsibility of each agency, with oversight from the Geospatial One-Stop project, to ensure costs are accurate and the performance of the budget is tracked.

3. Which alternative was chosen and why? Define the Return on Investment (ROI).

Alternative 2, the proposed alternative, is a substantial commitment in accelerating the development of NSDI and in implementing new e-government practices. This project provides the geospatial component fundamental for successful e-government. Additionally, it leverages the investments and data resources of government, academia, and the private sector.

A detailed Return on Investment (ROI) for each alternative discussed above has not been performed, however the examples described below illustrate the anticipated favorable ROI that should be realized from this initiative. In addition, a contract initiated in FY 2002 will be in place in the first quarter of FY 2003 to support the financial analysis of the project and will include developing Life-Cycle costs, ROI analysis and assist in better estimating the Net Present Value.

As GISs age, the opportunity arises to connect to legacy data through interoperable interfaces. Several agencies have identified cost savings that would result from replacement or redesign of their spatial data systems (i.e., Census Bureau's TIGER Modernization, USGS' National Map, and FEMA's Flood Map Modernization) that utilize local data. Through the use of interoperability tools and the NSDI Clearinghouse network, the Geospatial One-Stop will enable the utilization of previously stove-piped, legacy data by the geospatial community and the public at large. However, the use of the Geospatial One-Stop will not result in the direct replacement of existing systems. Rather, the Geospatial One-Stop Portal will leverage existing data and 'portals' through open based interoperability. The One-Stop Portal will be the point at which all partner data can be accessed through specified open interfaces.

The following sections describe an initial estimate of the benefits of the Geospatial One-Stop based on previous GIS cost benefit analyses. These clearly identify overall benefits that are closely associated with the Geospatial One-Stop.

According to a study conducted by the National Academy of Public Administration (NAPA)1, the field of GIS users is too immature, the tool kits too experimental, and the value too imprecise to make a universal assessment of the distribution of the costs and benefits of the economic activities that surround GIS. A study conducted by the Urban and Regional Information Systems Association (URISA)2 cited that while the costs of projects like the Geospatial One-Stop may be relatively easy to assess and highly 'front-loaded', benefits are often difficult to measure and may not arise until well into the life of the project. For the purpose of the Geospatial One-Stop project, the initial cost/benefit analysis is based on previous assessments of similar scale and scope from which clear cost/benefit data was derived. The benefits derived from the Geospatial One-Stop are similar, if not greater, than those demonstrated in the following international, Federal, state, and local projects.

Federal Projects

FEMA

Project: FEMA staff performed an assessment of the benefits and costs of implementing the Flood Hazard Mapping Program. This visionary plan for the future of the flood mapping program included:

- Completing the conversion of the 100,000 map panel inventory to a digital format;
- Conducting flood data updates for all flood-prone communities with inadequate or no floodplain mapping;

1 **Geographic Information for the 21st Century**, NAPA, 1998.

2 **Determining, Measuring, and Analyzing the Benefits of GIS**, URISA, 2000.

- Integrating communities, States, and regional agencies into the mapping process;
- Converting the maps to metric; and
- Improving customer service to make the maps easier to obtain and use, including electronic and digital printing and distribution.

Benefits: FEMA considered only those benefits for which reliable data could be obtained. Three primary benefits were quantified: reduced potential loss of new residential structures and their contents; reduced potential loss of new non-residential structures and their contents; and reduced cost of map reviews made possible by the improved digital format and distribution methods and more complete road networks included on the updated maps. The baseline funding for the current mapping program is $46 million (1997 dollars). The total discounted cost of the modernization plan is $847.6 million. The total discounted benefits of the modernization plan are $175 billion. This results in a benefit to cost ratio of 206.5.

Fish and Wildlife Services

Project: The addition of the U.S. Fish and Wildlife Services' National Wetland Inventory (NWI) digital wetland map files on the Internet has revolutionized the dissemination of wetland data. The NWI produces information on the characteristics, extent, and status of the Nation's wetlands and deepwater habitats and is available through the NSDI Clearinghouse network. The NWI uses the endorsed FDGC Wetlands Classification standards. Federal, state, and local agencies; academic institutions; the U.S. Congress; and the private sector use this information. The NWI National Center is responsible for constructing the wetlands layer of the NSDI. Digitized wetlands data can be integrated with other layers of the NSDI such as natural resources and cultural and physical features, leading to production of selected color and customized maps of the information from wetland maps, and the transfer of digital (computer-readable) data to users and researchers world-wide. Statewide databases have been built for nine states, and initiated in five others. Digitized wetland data are also available for portions of 37 other states.

Benefits: Before NWI started using the Internet to distribute digital wetland map files, they sold approximately 38,000 map files. Now, with access to a GIS and the Internet users have the ability to download and use the digital files of the NSDI. Since map files were made available over the Internet, over 1.35 million map files have been downloaded. At the average cost of $9.20 per map file, Internet users have saved over $12.4 million by accessing NWI wetland map files online.

BLM and USFS

Project: The National Integrated Land System (NILS) is a joint project between the BLM and USFS. NILS will provide a business solution to land managers who face an increasingly complex environment of complicated transactions, legal challenges, and deteriorating and difficult-to-access records.

The BLM and USFS are working in partnership with states, counties, and private industry to develop a common data model and software tools for the collection, management, and sharing of survey data, cadastral data, and land records information. These activities are implementing the FGDC-endorsed cadastral content data standards. Using GIS technology, NILS will greatly facilitate cooperative land management and better decision-making among all land managers.

The vision for NILS is to provide a solution that unifies the worlds of surveying and GIS. Implementing this vision will require a common data model, in-field computing tools, a measurement management engine to analyze survey data, and parcel creation and maintenance tools.

Benefits: The current costs of performing the functions related to the NILS from 2001-2008 are almost $609 million. The future costs of doing business are approximately $537 million. This results in a cost savings of over $72 million over the eight years. The total system life benefits from 2001-2008 are over $72 million. Some intangible benefits include:

- Improved accuracy
- Improved readability of existing Master Title Plats (MTPs)
- Accessibility of MTPs via the web
- Improved access to BLM records for state and local governments, businesses, and private sector
- Ability to make better decisions using current information
- Ability to generate maps that are not currently available
- Ability to provide better and faster service
- Increased availability of map products – on demand
- Consistency of services and products
- Reduced space requirements

BLM

Project: GeoCommunicator is a proactive web site for sharing information about data and activities of interest to land managers. Map navigation and content filters will allow users to discover information that meets their needs such as available parcel data, planned surveys, and potential cost-sharing partners. GeoCommunicator facilitates data sharing and collaborative efforts among land managers.

GeoCommunicator includes an activity notification option based on a subscriber's defined geographic extent. Providers of spatial information describe their data and activities in a searchable index, locate their geographic extents on a map interface, and enable information flow through email contact and links or paths to existing data stores.

Benefits: The current costs of performing the functions related to GeoCommunicator from 2001-2008 are approximately $5.4 million. The future costs of doing business are approximately $3.2 million, and the total cost of GeoCommunicator is under $1.9 million. This results in a cost savings of about $0.3 million over the eight years. The total system life benefits from 2001-2008 are about $2.2 million. Therefore, the benefit to cost ratio of GeoCommunicator is 1.1. Some intangible benefits include:

- Improved accuracy
- Improved readability of existing MTPs
- Accessibility of MTPs via the web
- Improved access to BLM records for state and local governments, businesses, and private sector
- Ability to make better decisions using current information
- Ability to generate maps that are not currently available
- Ability to provide better and faster service
- Increased availability of map products – on demand
- Consistency of services and products

DOC – NOAA – NOS – NGS

Project: National Height Modernization Study modernized NGS satellite-based National Spatial Reference System (NSRS) by replacing the existing, time-consuming, labor-intensive framework with a significantly smaller network designed to support and enhance the technological advantages of GPS. NSRS maximized the potential of GPS by enabling methods to determine height measurements to the accuracies required for their respective applications. This study assesses the needs and benefits for a modernized National Height System. NGS established the following major goals for the study:

- Identify user requirements for height data, including those requirements utilizing both horizontal and vertical data;
- Identify major users and applications of the National Height System and GPS-derived height data;
- Identify and recommend the most cost effective actions; and
- Evaluate the estimated costs to implement the recommended actions and their benefits to the nation.

Benefits:

Areas Benefiting from Modernized National Height System	Estimated Value (in millions) to Constituents	Explanation of Benefits
Nationwide Terrain	$33.50	▪ Replace less accurate Level 1 DEMs ▪ Enable rapid generation of contours for maps and GISs ▪ Enable 3-D modeling
Nationwide Watershed	$100.00	▪ Automated hydrologic modeling to predict locations and volumes of peak water concentrations
Special Flood Hazard Areas	$225.00	▪ Automated hydrologic modeling to determine depth and extent of flood waters ▪ Determination of flood risks and insurance rates
Coastal Erosion Zones	$11.25	▪ Accurate determination of coastal erosion rates ▪ Determination of insurance rates
Urban Areas	$500.00	▪ Urban planning ▪ Intelligent Transportation System planning ▪ Elevation layer in GIS ▪ Stormwater management
Farm Lands	$1,700.00	▪ Precision farming for planned application of water and fertilizer ▪ Control of unwanted runoff and stream contamination
Maritime Navigation and Safety	$9,600.00	▪ Positioning of dredges ▪ Positioning of cargo ships
Surveying Industry	N/A	▪ Improved survey procedures
Total	**$12,169.75**	

State and Local Projects

Dakota County

Project: The best reason to support GIS is that it benefits society. The biggest payoff is in doing things that had been impossible or impractical before. In Dakota County, 86% of the various county offices used GIS to some extent; 60% use the system regularly. The GIS investment was sound; benefits are accruing over time, and new benefits will appear continuously. The following is a list of high profile benefits gained by the county and cities so far.

Benefits:

- *Condemnation* – Dakota County attorneys use GIS to show local area, with recently sold properties highlighted and selling prices marked, giving a good picture of fair market value. *Result*: Saved the Dakota County millions in acquisition costs.
- *New library siting* – Geocoding the library database showed planners where cardholders live, which library they got their card from, and where gaps in library services existed. *Result*: Search time for the new Lakeville and Inver Grove Heights library sites was cut in half, while quality of the analysis improved.
- *Transit scheduling* – A private transit contractor serving handicapped residents is using county highway data for automated dispatching and scheduling. *Result*: At no extra public expense, citizens get faster service and fewer missed pickups.
- *Highway mapping* – Highway changes will now be entered into the GIS, so complete up-to-date version of the map will be available. *Result*: Making a map will only take about 40 hours instead of three weeks.
- *Pesticide education* – Combined the digitized county soil survey with federal data. *Result*: Makes maps showing pesticides leaching potential soils throughout the county.
- *Selling tax forfeit properties* – A GIS map showing location and features can automatically be printed for every tax-forfeit property. *Result*: Enables the county to come up with an alternate strategy to sell the parcel.
- *Assisted living planning* – Public Health Department staff collected data about facilities and programs for senior citizens who are at risk of being forced into nursing homes. *Result*: These data are mapped with overlays depicting race, population, and income to show the areas of need that are not being served.
- *Traffic planning* – The Planning Department will use land-use data from the assessor's office and road attributes from the highway department. *Result*: Create more complex and accurate traffic trip model.

City Benefits:

- *Financing infrastructure* – Burnsville used its infrastructure database to calculate the annual depreciation of different kinds of sewer pipe. *Result*: Calculations were used to support an infrastructure fee on utilities for new development that accurately reflects its impacts on the sewer system.
- *Cost savings on field work – Result*: Burnsville saved $60,000 on an existing contract when it first received its GIS data (two weeks of time and $4,800 for field work on each project).

New York State

Project: Using a collaborative process, members of the Legal and Data Coordination Work Groups developed a data-sharing framework, which became known as the New York State GIS Data Sharing Cooperative. The cooperative provides an arena to share data at no cost. Participants, or cooperative members, do not require data to join. By signing one standard data-sharing agreement, every member has access to every other member's data. Member contacts and their lists of datasets are placed on the New York State Clearinghouse, which is part of the NSDI Clearinghouse network.

Prior to the establishment of the cooperative, best estimates indicated that 800 to 900 GIS datasets were exchanged each year between major data holders. In 1998, when cooperative member data was placed online in the New York State Clearinghouse, it resulted in 8,500 datasets being downloaded, valued at $2 million. In 1999, more than 98,000 datasets were downloaded valued at $7.8 million. In 2000, 280,000 datasets were downloaded valued at more than $14 million. In 2001, downloads approached one million.

Benefits:

- Major inventory of GIS data was created and is actively maintained
- Network providing easy access to major data holders is actively maintained
- 24-hour, 7-day-a-week online access to data
- Increased datasets
- Increased cooperative membership

International Projects

Australia and New Zealand

Project: Huge economic gains can be made from developing and improving the access to information about land and geography, according to a study conducted by the Australia New Zealand Land Information Council (ANZLIC). The report is the first extensive study of the economic benefits of using land and geographic data of Australia and New Zealand. There are few areas of the economy that do not rely on land and geographic data information for planning, maintaining or rationalizing their activities.

Benefits: The study revealed that a benefit to cost ratio for data usage is approximately four to one. In the past five years this amounts to about $4.5 billion. As well as economic benefits, the study indicated that other benefits in the form of improved business and strategic planning, increased productivity and the development of new business opportunities in agriculture, mining and environmental management projects would eventuate. A series of case studies as part of the review revealed the magnitude of the benefits in improved land and geographic data.

- Melton Shire Council using improved land and geographic data information reduced the time taken to supply local area information to industry by more than 90 percent.
- Sydney electricity reduced its operating costs by more than $2 million as a result of applying improved data to maps, recording electricity usage and lowering the risk of asset damage associated with maintenance and construction.

While improvement to current land and geographic data systems can be made, the study revealed that Australia and New Zealand's existing infrastructure supplied data information to users at a cost far lower than alternative methods. Over the past five years, it was estimated that existing systems had saved users more than $5 billion, much of which had been reinvested to generate additional economic activity.

Australia

Project: The Community Access to Natural Resources Information (CANRI) is the first program to deliver seamless access to useful natural resources information to the community by:

- Unlocking the potential of existing natural resources information holdings by storing them in a consistent way that allows ready comparison and integrated use;
- Harnessing the power of the Internet to provide access to the State's natural resource information for the widest audience at minimal expense to both Government and the community;
- Streamlining processes for the creation of information by drawing on sources of dispersed data for user analysis at a single point;
- Applying common standards and protocols, allowing improved sharing of agency information;
- The application of advanced information technologies (IT); and
- Allowing natural resource agencies to focus on their data custodianship obligations, using resources previously spent on data supply.

CANRI is designed to make these changes and will provide enhancements to data, metadata, software, systems, and coordination processes as the basis for improved access to and sharing of natural resource information held by NSW government agencies.

Benefits: A benefit to cost ratio of 1.82 is estimated for the project and approximately 85% of CANRI's anticipated benefits will accrue to user groups external to the originating agencies. Total capital funding sought is $4.684 million over four years. Other benefits include:

- *Inbound logistics* - Data gathering effort and data entry processes can be better coordinated between agencies, eliminating duplication in both areas.
- *Operational efficiency* - Data will be able to be analyzed in a manner not previously possible, making the analysis required for resource management or regulation quicker and easier, and helping to ensure that decisions are based on the most up-to-date information.

Additional Study Examples

A cost/benefit analysis performed for a GIS3 highlighted some additional examples of studies that were performed to gather costs and benefits related to geospatial data include:

In 1995, the city of Philadelphia (CA) used GIS to optimize their garbage truck routes. In the following year, the city saved over $1 million in overtime.

- The state of Wyoming used its GIS to audit the mass appraisal process and found that approximately 250,000 parcels were not on the tax rolls.
- In 1996, the city of Scottsdale (AZ) had only 3 weeks in which to respond and challenge the numbers provided by the Census Bureau's mid-decade census. Due to the city's GIS database the challenge was approved, resulting in increased per capita revenues to the city of $1.8 million per year for the next five years - a total of $9 million. This response was possible because the city had GIS available.
- The city of Redlands (CA) has used ArcView for crime analysis. They have been able to determine crime

3 **Cost Benefit Analysis for Geographic Information System – Implementation Justification**, submitted to Bruce Oswald Chair of the New York State GIS Coordinating Body by Eliane Silva, March 4, 1998 (http://www.nysgis.state.ny.us/costanal.htm)

patterns that allow them to focus police activities in target areas to reduce crime. They were also able to justify altering police beats to focus their resources.

Summary

Each of these studies has exemplified significant benefits believed to be similar to the Geospatial One-Stop. The following table summarizes some of the significant benefits from the projects/studies above.

Project	Benefits
FEMA – Flood Hazard Mapping Program	▪ Total discounted benefits = $175 billion ▪ Total discounted cost = $847.6 million ▪ Benefit to cost ratio = 206.5
Fish and Wildlife Services – NWI	▪ 6,400% increase in sales of map files ▪ Users have saved $12.4 million accessing map files online
BLM and USFS – NILS	▪ Current cost of doing business = $609 million ▪ Future cost of doing business = $537 million ($72 million cost savings) ▪ Total system life benefits = $72 million
BLM – Geocommunicator	▪ Current cost of doing business = $5.4 million ▪ Future cost of doing business = $3.2 million ▪ Total cost of GeoCommunicator = $1.9 million ($0.3 million cost savings) ▪ Total system life benefits = $2.2 million ▪ Benefit to cost ratio = 1.1
DOC – NOAA – NOS – NGS – National Height Modernization Study	▪ Estimated value to constituents = $12,169.75 million
New York State GIS Data Sharing Cooperative	▪ 280,000 datasets valued at more than $14 million ▪ Estimating more than one million datasets in 2001
ANZLIC	▪ Data usage benefits = $4.5 billion ▪ Benefit to cost ratio = 4
CANRI	▪ Benefit to cost ratio = 1.82

3. A. Are there any quantitative benefits that will be achieved through this investment (e.g., systems savings, cost avoidance, stakeholder benefits, etc)?

Yes, based from the analysis performed in section 2 above, the Managing Partner believes that Geospatial One-Stop will yield substantial quantitative benefits through reducing duplication of efforts in intergovernmental geospatial data acquisition and the incorporation of framework data layers needed in a variety of portals that will support the delivery of government services.

3. B. For alternative selected, provide financial summary, including Net Present Value by Year and Payback Period Calculations:

A contract initiated in FY 2002 will be in place in the first quarter of FY 2003 to support the financial analysis of the project and will include developing Life-Cycle costs, ROI analysis and assist in better estimating the Net Present Value.

YEAR =	FY	FY	FY	FY	FY	FY	FY	FY	FY

4. What is the date of your cost benefit analysis? (Need exact date e.g. MM/DD/YYYY)

No specific cost benefit analysis has been performed to date. However, an analysis of related projects where cost benefit analysis has been performed illustrate expected cost benefits - see Section 2 above. A value proposition report is planned for FY03 that should facilitate a more thorough cost benefit analysis for the project.

I.F. Risk Inventory and Assessment (All Assets)

In this section, describe the results of your risk assessment for this project and discuss your plans to eliminate, mitigate, or manage identified risks. Risk assessments should be performed at the initial concept stage and then monitored and controlled throughout the life-cycle of the project, and should include risk information from all stakeholders. Risk assessments for all projects must include schedule, costs (both initial and life cycle), technical obsolescence, feasibility, reliability of systems, dependencies and interoperability between this project and others, surety (asset protection) considerations, risk of creating a monopoly for future procurements, capability of agency to manage the project, and overall risk of project failure.

In addition, for IT projects risk must be discussed in the following categories 1) Organizational and Change Management, 2) Business, 3) Data/Info, 4) Technology, 5) Strategic, 6) Security, 7) Privacy, and 8) Project Resources. (Agencies may include others for IT, and may define the core set for other assets). For security risks, identify under the description column the level of risk as high, medium, or basic. What aspect of security determines the level of risk, i.e., the need for confidentiality of information, availability of information or the system, reliability of the information or system?

The following is a list of resolutions to the barriers that may impede the project.

- Maintenance of open trusted relationships among all levels of government.
- Sufficient funding;
- Adequate human resources with proper skill sets;
- Support from senior level officials;
- Communication and outreach programs to fully describe the Geospatial One-Stop and encourage participation;
- Evolution from stove-piped, single agency systems to Geospatial One-Stop; and

The barriers will be mitigated through the creation and maintenance of a project plan (which includes cost and schedule performance) actively championed by senior OMB, DOI and Federal agency officials, and embraced by state, local, and tribal government.

Detailed below are project risks and a mitigation plan for each of the risks is described:

Date Identified	Area of Risk	Description	Probability of Occurrence	Strategy for Mitigation	Current Status as of the date of this exhibit
	Organizational and Change Risks	▪ The project goal is predicated on dealing with a high degree of complexity and diversity across the NSDI Framework Data themes and the various sets of stakeholders. ▪ Agencies may be unwilling to adopt Framework Data standards and maintain data. ▪ Lack of accountability or incentives for agency participation could result in undefined partner roles and responsibilities.	High	▪ Educate and encourage a high level of ongoing information exchange; Implement many pilots and other demonstration sub-projects to build confidence that the processes and systems work and do scale to the overall project objectives. ▪ Establish a joint project management office. ▪ Maximize the use of interoperability tools to adopt the Framework Data standards. ▪ OMB must enforce OMB Circular A-16 and the adoption of approved Framework Data standards. ▪ Upon approval, create a detailed project plan that defines partnering agencies roles and responsibilities. ▪ Support state and local government participation. ▪ Place Federal personnel in non-Federal organizations at Federal expense to facilitate communication and partnerships. ▪ Consult with local governments on other approaches to institutionalize change.	The following activities have been under taken to mitigate the risks. Transportation Pilot Initiated. The project plan has been established OGC process has begun for developing a portal through open specifications Intergovernmental Board of Directors Established I-Team Process utilized for State Involvement Contract with PTI for local outreach
	Business Risks	▪ Because the benefits of any individual interoperable interface accrue primarily to external users, an agency is inclined to	High	▪ Data providers need to be confident that while they may bear an incremental burden in a particular instance to benefit others, that others will bear a corresponding burden in other instances to benefit them, and that over the long term participants	Guidance on Planned Data Acquisition Initiated OMB A-16 required data be based on Framework Data

Date Identified	Area of Risk	Description	Probability of Occurrence	Strategy for Mitigation	Current Status as of the date of this exhibit
		deploy a cheaper, agency-specific and non-interoperable solution.		will save money and get better service. ▪ OMB will only fund data acquisition projects that are in compliance with FGDC data content standards, and open portal interface specifications.	Content Standards
	Data/Info Risks	▪ Data integrity may be at risk without the use of proper security features. ▪ The use of maliciously altered or inaccurate data could have profound consequences.	Basic	▪ Each Partner Agency is responsible for the accuracy and currency of its data. This will insure that the data will be the most current data available and maintained by the appropriate subject matter experts. Each agency will conform to their department's data integrity processes and security plans.	A Security Plan lead has been contacted to Initiate the coordination and formulation of interagency Security Plan.
	Technology Risks	▪ Consensus on standards for some NSDI Framework Data resources may be elusive, even with an actively supported consensus process among stakeholders. ▪ Perception of NSDI may be pre-determined by early participants, occasionally serving to dissuade future participation by less actively involved stakeholders.	Basic	▪ NSDI Framework Data content is defined at an adequate level of detail by the stakeholders to facilitate exchange of data and linkages between systems as a 'least common denominator. ▪ Emphasize education, outreach, and active involvement among all stakeholders throughout all aspects of the project. ▪ Support and encourage open interchange among stakeholders in all segments of the geospatial community, both within and across all NSDI Framework Data specializations; leverage the role that OMB has reasserted in stewarding cross-agency engagement in the standards process. ▪ Support state and local government travel	The Intergovernmental Board of Directors and other outreach efforts have been utilized to significantly broaden the participation from the Non-Federal sector. Funding has been allocated and a Travel support contract has been initiated to facilitate travel from non-federal participants.

Date Identified	Area of Risk	Description	Probability of Occurrence	Strategy for Mitigation	Current Status as of the date of this exhibit
		▪ An agency having the lead role for a NSDI Framework Data resource may formalize an agency practice or self-limiting data-partnering network rather than develop an authentic consensus among stakeholders.		costs at the draft committee and standards working group step. ▪ Each standards development team will ensure that there is sufficient representation on the team from Federal, state, local, and tribal governments, and other sectors to represent the requirements of those sectors. ▪ As part of the Standards Process a voting mechanism will be established to ensure equal participation by each of the (1) Federal, (2) state, and (3) local and tribal government sectors, particularly in evaluating and making recommendation on the Committee Draft and final proposed standards.	State, Local and Tribal representatives of the Board possess 2/3 of the vote in guiding the direction of the project. They will approve when each standard is acceptable for delivery to the ANSI Public Review process.
	Strategic Risks	▪ The sharing of geospatial data depends on it being well documented in a standardized format; yet such documentation processes are not widely integrated into as routine agency business processes. ▪ There are evolving policies with respect to the responsibilities of the Federal government,	Medium	▪ Deploy mechanisms that leverage existing business processes, such as the agency's planning and production databases, to automatically generate Clearinghouse records. ▪ Make project processes and systems flexible as to the diverse and changing roles of the various stakeholders; design systems to be useful even if partially implemented ▪ Candid discussions of concerns among all stakeholders must be aired and policy officials must make a clear and public case for whatever decisions are made;	Initial guidance on Planned Data Acquisition Metadata has been developed as the initial step in providing a Geospatial Data Market Place. Outreach plan created.

Date Identified	Area of Risk	Description	Probability of Occurrence	Strategy for Mitigation	Current Status as of the date of this exhibit
		such as the pending revision of OMB Circular A-16. ▪ Perspectives of the various stakeholders in the NSDI are difficult to reconcile in areas such as how much the government should be constrained to "raw data access" rather than publishing "finished products" that might instead by provided by commercial vendors ▪ Agencies have questions about current guidance that result in providing public access to information that could be used against the United States. ▪ Framework data standards should be based on standards being developed by ANSI, ISO, and NIST, and be consistent with current processes.		government participants will emphasize use of "standards-based Commercial Off-the-Shelf Software" products ▪ Revisit policies and guidance to ensure they are still accurate in light of homeland security issues, and reinforce the guidance ▪ Work with ANSI, ISO, and NIST to align efforts with emerging standards currently being developed	

Date Identified	Area of Risk	Description	Probability of Occurrence	Strategy for Mitigation	Current Status as of the date of this exhibit
	Security Risks	▪ Data integrity may be at risk without the use of proper security features. ▪ The use of maliciously altered or inaccurate data could have profound consequences.	Basic	▪ DOI agencies will conform to the current DOI security plan; other agencies will conform to their department's security plan.	A Security Plan lead has been contacted to Initiate the coordination and formulation of interagency Security Plan.
	Privacy	▪ Concern regarding privacy may be expressed regarding geospatial data content.	Basic	▪ Only base 'Framework' data currently planned to be contained in Geospatial One-Stop. ▪ FGDC members have adopted a privacy policy for geospatial data that is based upon existing public law and policy. FGDC Policy on Access to Public Information and the Protection of Personal Information Privacy in Federal Geospatial Databases, dated April 1998, outlines this policy (http://www.fgdc.gov/fgdc/policies/privacypolicy.pdf).	Addressing privacy concerns will be an important part of the GOS outreach efforts.
	Project Resources	▪ Actualizing and maintaining commitments from partner agency budgets may be a risk. ▪ Economic impacts on State and local budgets may hinder their implementation of the	Medium	▪ Frequent Federal Partner meetings reviewing funding status and expediting fund transfers. ▪ An intergovernmental Board of Directors and a contract researching funding incentives needs and options for State, local and tribal governments are an ongoing part of the program.	Monthly Federal Principal Contact meetings have been established along with additional Module and topical supplemental meetings. Three Intergovernmental

Date Identified	Area of Risk	Description	Probability of Occurrence	Strategy for Mitigation	Current Status as of the date of this exhibit
		framework standards and serving their data to be incorporated with Federal data.			Board of Director Meeting have taken place.

1. What is the date of your risk management plan? (Need exact date e.g. MM/DD/YYYY)

The Geospatial One-Stop initiative does not involve a major Federal IT purchase. Its core mission is focused on building an interoperable portal and framework data standards that will enable the spatial delivery of government services. The risk management plan outlined above was reviewed on August 26, 2002. The Managing Partner and the Portfolio Manager will evaluate the need for incorporating a full risk management plan in FY03.

I.G. Acquisition Strategy

1. Will you use a single contract or several contracts to accomplish this project?

Multiple agencies and levels of government will participate in the Geospatial One-Stop by delivering and/or maintaining data and information generated by their organizations, which then become accessible to all users. Due to its collaborative nature, the Geospatial One-Stop will use multiple mechanisms to formalize the roles to be played by partners and contractors. The following services have been acquired for this project:

- Data Modelers
- Facilitators
- Framework Data Theme Managers
- Industry Partners for Test Beds and Interoperability Tools
- Outreach Personnel
- Overall Project Management and Coordination

This project anticipates using government resources to their fullest extent where there are existing capabilities and expertise to minimize redundant effort. However, where it is anticipated that there is a lack of existing capabilities and expertise, the project staff will utilize contractor support and will determine the most appropriate government service contract depending on the work to be performed, and how it will be executed.

1.A. If multiple contracts are planned, explain how they are related to each other, and how each supports the project performance goals.

Module	Contracts	Performance Goal	Status
Project Management Support	Project Management Support Project Outreach Coordination	Project Coordination Multi-Agency Participation	In-place
Module 1 Standards Development	1) Standards Facilitation 2) I-Teams Coordination 3) Modeling Support. 4) User Requirements 5) Travel Support. 6) Value Proposition 7) Local Govt. Outreach	Standards Development Framework Implementation Standards Modeling Development User Requirements Analysis Travel Coordination State and Local Funding Incentives Increase Local Govt. Participation	In-place In-place In-place In-place In-place In-place In-place
Module 2 Data Inventory	No Contracting Planned	NA	NA

Module	Contracts	Performance Goal	Status
Module 3 Planned Acquisition	No Contracting Planned	NA	NA
Module 4 Web Services	Web Services	GIS Web Services	In-place
Module 5 Portal Development	Portal Development	Open Standards Portal Development	In-place

2. What type(s) of contract(s) will you use (e.g. cost reimbursement, fixed-price, etc.)?

The project will use multiple performance-based government service contracts.

2.A. For cost reimbursement contracts, define risk not sufficiently covered by the risk mitigation plan to require this type of contract.

Procurement risks have been managed in the following ways:

1) Use of the Open GIS (OGC) process for technology insertion – This process facilitates developing the project in phases that take advantage of developing technologies throughout the projects development life cycle and implementation. In addition, this process supports the development of non-proprietary solutions and requires that vendors supply in-kind funding.

2) Contract Office Technical Representatives (COTRs) and Contract Officers (CO) have been assigned to each contract that monitor progress and deliverables.

3. Will you use financial incentives to motivate contractor performance (e.g. incentive fee, award fee, etc.)?

Yes, this project may use financial incentives, where necessary, to ensure contractor performance.

4. Will you use competition to select suppliers?

Yes, suppliers will be competitively selected through existing government service contracts with the exception of suppliers identified by local governments to support their effective participation.

5. Will you use commercially available or COTS products, or custom-designed products?

Yes, it is anticipated that the Geospatial One-Stop will use standards-based commercial off-the-shelf (SCOTS) products. However, there may be times when the interfaces needed to make individual SCOTS products work together in a seamless suite. The Federal Partners have historic, innovative relationships with industry, interoperability standards organizations (such as Open GIS Consortium) that improves the interoperable functionality of SCOTS products (software, hardware, and web services). Such relationships reduce risks and leverage technology.

6. What is the date of your acquisition plan?

The Geospatial One-Stop initiative does not involve a major Federal IT purchase. Its core mission is

focused on building a framework of interoperability and data standards that will enable the spatial delivery of government services. A detailed acquisition plan does not currently exist. The acquisition plan outlined above was reviewed on August 26, 2002. The Managing Partner and the Portfolio Manager will evaluate with OMB the need for incorporating a full acquisition plan in FY03.

7. How will you ensure Section 508 compliance?

We will work with the E-Government Program Office to ensure compliance with Section 508. We will follow all guidance from the Section 508 Office.

I.H. Project and Funding Plan

The information required by this section will be provided by your earned value management system (EVMS) and the EVMS software program you use that meets the ANSI/EIA Standard 748 (see section 300.4 (earned value management)). Information on earned value management systems is available at http://www.acq.osd.mil/pw.

As a result of the involvement of multiple agencies, there has not been a single performance-based management system identified for use for Geospatial One-Stop. Currently, the project is using Microsoft Project and Excel to formulate project schedule and budget. The project identifies a single Executive Director, with appropriate authority, and will use the intergovernmental Board of Directors as the project oversight group.

I.H.1. Description of performance-based management system (PBMS):

Name the software program that meets ANSI/EIA Standard 748 that you will use, or are using, to monitor and manage contract and project performance. If the project is operational (steady state), define the operational analysis system that will be used. If this is a mixed life-cycle project with both operational and development/modernization/ enhancement (DME) system improvement aspects, EVMS must be used on the system improvement aspects of the contract and operational analysis on the operations aspects. Using information consistent with the work breakdown structure (WBS), provide the information requested in all parts of this section.

Project performance will be reported regularly to the Board of Directors, OMB representatives, and the PMC. In addition, if the project schedule or budget deviates ±10% from the established baseline, the Managing Partner will report this to OMB along with corrective actions.

I.H.2. Original baseline (OMB-approved at project outset):

What are the cost and schedule goals for this phase or segment/module of the project (e.g., what are the major project milestones or events; when will each occur; and what is the estimated cost to accomplish each one)? Also identify the funding agency for each milestone or event if this is a multi-agency project. If this is a multi-agency project or one of the President's E-Gov initiatives, use the detailed project plan with milestones on the critical path, to identify agency funding for each module or milestone. (This baseline must be included in all subsequent reports, even when there are OMB-approved baseline changes shown in I.H.3).

Each milestone is accomplished primarily through multi-agency in-kind FTE support from agency base funding. Limited project cash funding is pooled into a Geospatial One-Stop account used to support all activities.

The Geospatial One-Stop Initiative consists of 5 Modules of Work. The Modules are:

Module 1: Standards Development
Module 2: Inventory and Document Existing Framework Data
Module 3: Inventory and Document Planned Data Collection Activities
Module 4: Interoperable Web Portal Service
Module 5: Deployment of Commercial-grade Portal Services

These Modules, Tasks, Milestones and Performance Goals are described more completely after the table below.

Cost and Schedule Goals: Original Baseline for a Phase/Segment/Module of Project				
Phase/Milestone Description	**Schedule**		**Duration**	**Planned Cost (Agency Funding See Next Table)**
	Start Date	**End Date**	**Days**	
FY 2002				(000)
1a* – Requirements Analysis	01/02	01/02	30	$25
1b – OMB BDR	02/02	06/02	150	$50
1c – Draft Cost Benefit Analysis Report	02/02	08/02	210	$150
1d – Final Cost Benefit Analysis Report	09/02	10/02	60	$50
2 – Inventory Existing Data	01/02	05/02	150	$430
3 – Inventory Planned Data	01/02	07/02	210	$215
1e – Working Draft NSDI Framework Standards	02/02	09/02	240	**$3,875
FY 2002 Total				$4,795
FY 2003				
4a – Interoperability Tools	01/02	01/03	390	***$600
1f – Committee Draft NSDI Framework Standards	10/02	01/03	120	**$2,375
1g – FGDC Final Draft NSDI Framework Standards	02/03	05/03	120	$1,500
1h – FGDC Standards Endorsement NSDI Framework Standards4	06/03	07/03	45	$0
4b – Web Mapping and Data Access Standards	10/02	05/03	240	$1,500
4c – Prototype Services Integration	10/02	11/02	60	$500
5 – Reusable, Commercial Replication Services for Web Portal	06/03	09/03	120	$2,000
FY 2003 Total				$8,475

*Number corresponds to component (See Part I Project Description) with which the task is associated.
**Includes additional $1M allocated for the state/local coordination team.
***All $600,000 of the planned Interoperability Tools phase will be spent in FY 2002.

4 The FGDC may seek approval of NSDI Framework Data Content Standards by the ANSI-accredited standards development organization **National Committee for Information Technology Standards (**NCITS) (www.ncits.org), but ANSI/NCITS is not factored into this schedule.

The following tables represent a breakdown of the costs, by fiscal year, by task, by agency costs. All funds identified within these tables should be used to support the Geospatial One-Stop.

FY02

	NOAA	Census	DOT	USACE	NIMA	FEMA	EPA	USDA	NASA	USGS	BLM	FGDC	Total
1a – Requirements Analysis												$25	**$25**
1b – OMB BDR												$50	**$50**
1c – Draft Cost Benefit Analysis												$150	**$150**
1d – Final Cost Benefit Analysis												$50	**$50**
2 – Inventory Existing Data	$60	$30	$30	$30	$30	$30	$30	$30	$30	$90	$30	$10	**$430**
3 – Inventory Planned Data	$30	$15	$15	$15	$15	$15	$15	$15	$15	$45	$15	$5	**$215**
1e – Working Draft NSDI Framework Standards	$250	$125	$125	$100	$125	$100	$100	$125	$175	$375	$125	$150	**$1,875**
1e – Working Draft NSDI Framework Standards **New Money***	$85	$85	$85	$85	$85	$85	$85	$85	$85	$85	$85	$65	**$1,000**
1e – In-kind State and Local Standards Coordination Team**	$90	$90	$90	$90	$90	$90	$90	$90	$90	$90	$90	$10	**$1,000**
AGENCY TOTAL	**$515**	**$345**	**$345**	**$320**	**$345**	**$320**	**$320**	**$345**	**$395**	**$685**	**$345**	**$515**	**$4,795**
Department TOTAL	**$860**		**$345**	**$665**		**$320**	**$320**	**$345**	**$395**	**$1,545**			**$4,795**
	DOC		**DOT**	**DOD**		**FEMA**	**EPA**	**USDA**	**NASA**	**DOI**			

(Dollars in thousands)

*This money represents the portion of task 1e that has been identified as new money above and beyond redirected money for this task. For ease of budget this sum total of $1M per year could be allocated to the FGDC for redistribution.

**The Geospatial One-Stop assumes that Federal, field-level employees from the Federal Partner Agencies will be designated as liaisons corresponding with all involved parties. These liaisons will be designated on a state or multi-state basis. It is expected that each employee will spend approximately 50% of working time for the duration of the project.

Note regarding agency contribution: The FGDC currently does not know base level funding for geospatial activities per agency. Nor does the FGDC know if the funding identified in Part III Section B-1 will come from base funds or redirected funds.

FY03

	NOAA	Census	DOT	USACE	NIMA	FEMA	EPA	USDA	NASA	BLM	USGS	FGDC	Total
4a – Interoperability Tools	$50	$50	$50	$50	$50	$50	$50	$50	$50	$50	$50	$50	**$600**
1f – Committee Draft NSDI Framework Standards	$250	$125	$125		$125			$125	$75	$125	$375	$50	**$1,375**
1g – FGDC Final Draft NSDI Framework Standards				$100		$100	$100		$100			$100	**$500**
1g – FGDC Final Draft NSDI Framework Standards **New Money***	$85	$85	$85	$85	$85	$85	$85	$85	$85	$85	$85	$65	**$1,000**
4b - Web Mapping	$200	$100	$100	$100	$100	$100	$100	$100	$100	$100	$300	$100	**$1,500**
4c - Prototype Services Integration	$40	$40	$40	$40	$40	$40	$40	$40	$40	$40	$40	$60	**$500**
5 - Reusable, Commercial Replication Services for Web Portal	$180	$180	$180	$180	$180	$180	$180	$180	$180	$180	$180	$20	**$2,000**
1f – In-kind State and Local Standards Coordination Team**	$90	$90	$90	$90	$90	$90	$90	$90	$90	$90	$90	$10	**$1,000**
AGENCY TOTAL	**$895**	**$670**	**$670**	**$645**	**$670**	**$645**	**$645**	**$670**	**$720**	**$670**	**$1,120**	**$455**	**$8,475**
Department TOTAL	**$1,565**		**$670**	**$1,315**		**$645**	**$645**	**$670**	**$720**	**$2,245**			**$8,475**
	DOC		**DOT**	**DOD**		**FEMA**	**EPA**	**USDA**	**NASA**	**DOI**			**$8,475**

(Dollars in thousands)

*This money represents the portion of task 1g that has been identified as new money above and beyond redirected money for this task. For ease of budget this sum total of $1M per year could be allocated to the FGDC for redistribution.

**The Geospatial One-Stop assumes that Federal, field-level employees from the Federal Partner Agencies will be designated as liaisons corresponding with all involved parties. These liaisons will be designated on a state or multi-state basis. It is expected that each employee will spend approximately 50% of working time for the duration of the project.

Note regarding agency contribution: The FGDC currently does not know base level funding for geospatial activities per agency. Nor does the FGDC know if the funding identified in Part III Section B-1 will come from base funds or redirected funds.

Detailed Task Descriptions:

Module and Task/Milestone Description	Performance Goals
Module 1: Standards Development and Cost Benefit Analysis	
• **Task** 1a - Requirements Analysis: Conduct an assessment of the needs of the different elements of the geospatial data user community for Framework data content. In addition this work activity will include identification of existing data content models that may provide input into the development of the standards.	• Achieve federal, state, and local government consensus on common requirements and business needs defined for Framework Data content on a national basis
• **Task 1b – OMB BDR**: This task will consist of a Budget Data Request issued by the Office of Management and Budget to gather information about the costs and expenditures of Federal agencies for Spatial data. In order to be able to collect information that will be beneficial to this Initiative it is anticipated that the BDR will concentrate on collection information for Framework themes of data. Cancelled	• Completion of an OMB data call for the identification of Federal agency expenditures and outputs for collection and use of Framework themes of data.
• **Task 1c – Draft Cost Benefit Analysis Report**: Development of the draft of a detailed cost benefit analysis of the value of shared spatial data infrastructure standards and tools that enable common access and use of Framework data and information. The Draft Report will build upon information gathered through the OMB BDR in Task 1b. Cancelled	• Completion of a Draft Report that quantifies the specific costs and benefits of the initiative, and provides analysis and information that will aid in planning future efforts to more effectively leverage investments in a shared spatial data infrastructure.
• **Task 1d – Value Proposition Report**: Development of a cost analysis of the value of shared spatial data infrastructure standards and tools that enable common access and use of Framework data and information.	• Completion of Value Proposition Report that quantifies the costs and benefits of the initiative, and provides analysis and information that will aid in planning future efforts to more effectively leverage investments in a shared spatial data infrastructure.
• **Task 1e – Working Draft of NSDI Framework Standards:** The Standards Process will be used to guide the development and approval of the Framework	• Completion of a Working Draft for each of the Framework Themes that is acceptable to the majority of the user community.

Module and Task/Milestone Description	Performance Goals
data standards. Throughout the process the Project will coordinate with ANSI, ISO, and NIST to ensure alignment of efforts with emerging standards currently being developed Building on information gathered in Task 1a Requirements Analysis. Each of the Standards Development Teams will engage members of the geospatial data community and develop a Working Draft for the proposed standard. This Task will correspond to completion of Step 4 Produce Working Daft of the Standards Process. Standards will be developed for each of the 7 defined NSDI Framework categories: - Elevation - Orthoimagery - Hydrography - Administrative Boundaries - Transportation Networks - Cadastral - Geodetic Control	
• **Task 1f – Committee Draft of NSDI Framework Standards**: After the Working Draft is completed the Standards Development Teams will submit the Working Draft for pre-public review to a wide range of interested users and producers to obtain their input on the Draft. These inputs will be used in completing Step 5 of the FGDC Standards Process and preparing a Committee Draft for public review.	• Completion of an initial review of the Draft standard and development of a committee draft for formal public review.
• **Task 1g – FGDC Final Draft of NSDI Framework Standards**: After the formal public review period the Standards Development Teams will review all comments and prepare a Final Draft of the Standards. The proposed standard and public response document will be reviewed by the Standards Working Group and will constitute the completion of the Final Draft. This Task corresponds to completion of Step 10 of the FGDC Standards Process. As with all previous Tasks the process will include broad representation of all sectors.	• Completion of a Final Draft for each Framework Data Theme that represents the needs of all sectors.

Module and Task/Milestone Description	Performance Goals
• **1h – FGDC Standards Endorsement of NSDI Framework Standards**: The Coordination Group reviews the recommendations of the Standards Working Group and forwards them for the endorsement of the Board of Directors. Board endorsement completes Step 12 of the FGDC Standards Process. • **1j -- Proof of Concept**: service demonstration for transportation data content model	• Endorsement of the Framework Data Content Standards for each of the 7 NSDI Framework Themes. • Establish prototype servers and clients demonstrating access to transportation data
Module 2: Inventory and Document Existing Framework Data • **Task 2 - Inventory Existing Data**: Complete an inventory and document all existing Federal agency Framework category data holdings using the FGDC Metadata Standard and publish the Metadata Records in an NSDI Clearinghouse. Identify key state and local data holdings and catalog their metadata documentation and publish as well.	• All federal Framework category data, and key state and local government data, has been documented as Metadata, which is accessible and searchable in the NSDI Clearinghouse Network.
Module 3: Inventory and Document Planned Data Collection Activities • **Task 3 – Inventory Planned Data**: Complete an inventory and document all planned federal Framework category data collection activities using the FGDC Metadata Standard. Publish the Metadata Records in the NSDI Clearinghouse Network. Encourage major state and local data collection plans to be similarly documented.	• All planned data collection activities for Framework category data are documented and the completed Metadata is accessible and searchable in the NSDI Clearinghouse Network.
Module 4: Interoperable Web based Clearinghouse Services: • **Task 4a – Interoperability Tools**: Working with Industry organizations develop tools to facilitate the use of data content standards and models and semantic translation of	• Interoperability tools and semantic translator facilitate the implementation and use of data content standards and models.

Module and Task/Milestone Description	Performance Goals
legacy data sets to assist in sharing and integration of data from different sources. • **Task 4b – Web and Data Services Protocols**: Identify and develop the needed protocols and specification for providing Web based data services that improve the ability to access and use the NSDI Clearinghouse Network. • **Prototype Services Integration**: Prototype and test the access and service protocols developed for use on the Geospatial One-Stop Portal	• Specific packaging of standards based protocols and specifications are developed that expand the NSDI Clearinghouse Network capabilities • Prototype is completed and a specific set of standards based protocols are established to ensure that the Geospatial One-Stop Portal uses replicable dependable commercial products.
Module 5: Deployment of Commercial-grade Portal Services • **Task 5a—Develop portal interface** for browser and application use • **Task 5b– Commercial-grade replicated data/map services.** Each of the Federal Partners will install and deploy standards-based data services to support the Geospatial One-Stop. This is a virtual network that enhances and extends the NSDI Clearinghouse Network.	• The establishment of a comprehensive Federal Portal for geospatial data and services • Federal partner web services established and available online 24X7.
• **Tasks 6 – Incentives for State, Local and Tribal Governments**	• A Geospatial One-Stop grant program will encourage multi-sector partnerships. Grants will be provided to local, state, and tribal governments as seed money to formalize partnerships; and ensure local capacity for stewardship and data exchange.
• **Task 7 – Publicize and Implement Standards**	• Education and outreach effort to all 50 states.
• **Task 8 – Portal Improvements/Expanded use of Geospatial Architecture**	• Enhance portal capability to better serve users, improve initial response time and simplify access.

Each milestone is accomplished primarily through multi-agency in-kind FTE support from agency base funding. Limited project cash funding is pooled into a Geospatial One-Stop account used to support all activities.

IH.3 Proposed Baseline Changes (applicable only if OMB approved the changes):

What are the new cost and schedule goals for the project (e.g., what are the major project milestones or events; when will each occur; and what is the estimated cost to accomplish each one)? Also identify the funding agency for each milestone or event if this is a multi-agency project. If this is a new project in the FY04 budget year, this section will be blank for your initial submission.
The following tables represent a breakdown of our original baseline costs, by fiscal year, by task, by agency costs. All funds identified within these tables should be used to support the Geospatial One-Stop.

The Geospatial One-Stop Initiative consists of 5 Modules of Work. The Modules are:

Module 1: Standards Development
Module 2: Inventory and Document Existing Framework Data
Module 3: Inventory and Document Planned Data Collection Activities
Module 4: Web Services and Portal Design
Module 5: Portal Implementation

Modules 6-8 are being developed
Module 6: Incentives for State, local and Tribal Government
Module 7: Publicize and Implement Standards
Module 8: Portal Improvements/ expanded use of Geospatial Architecture

The following table shows a breakdown of the costs for fiscal year 2002 by task and agency. All funds identified within these tables should be used to support the Geospatial One-Stop.

New Proposed Baseline:

	Cost and Schedule Goals				
Description	**Schedule**		**Duration**		
	Start Date	**End Date**	**Days**	**Planned Cost**	**Funding Agency**
Planning/Development Phase					
Project Management			On Going		Fed Partners
Select Management Team	9/23/02	11/30/02	51		
Overall Project Plan	9/27/02	10/31/02	40		
Outreach Plan	9/23/02	10/31/02	47		
Selection of Exec. Dir.		12/02			
Redraft of Exhibit 300		12/02			
Value Proposition Report (replaced Cost Benefit)	09/02	04/03	210	$250	FGDC
1– Standards Development				$6,335	Fed Partners
Requirements Analysis	06/02	08/02	60	$25	FGDC
Initial Draft Framework Standards	05/02	02/03	150		
Submit Proposal to ANSI	03/02	05/02	60		
ANSI Acceptance	07/02	07/02	30		
Call for participation	05/02	08/02	60		
Convene Standards Teams	08/02	08/02	30		
Theme Schedules	9/20/02	9/26/02	7		
Initial Draft	08/02	02/03	30		
2 – Inventory Existing Data	04/02	02/03	120	$430	Fed Partners
3 – Inventory Planned Data	09/02	02/03	150	$215	Fed Partners
Guidance on Metadata Standard for documenting Agency plans	11/02	12/02	30		
Documentation of Agency Plans using Metadata	10/02	02/03	150		

Phase/Milestone Description	FY03 Cost and Schedule Goals (Dollars in thousands)				
	Schedule		Duration		
	Start Date	End Date	Days	Planned Cost	Funding Agency
1– Standards Development				$4,375	Fed Partners
ANSI public Review of Framework Standards	02/03	09/03	120		
Approved ANSI Framework Standards5	12/03	01/04	45	$0	
4 – Portal Design & Web Services				$2,100	Fed Partners
Portal Kick Start	9/27/02	10/11/02	14		
Release of RFQ	10/11/02	12/13/02	52		
Kick Off Meeting	02/03/03	02/07/03	5		
Public Alpha Version	02/10/03	05/23/03	100		
5 – Portal Implementation	TBD			$2,000	Fed Partners
FY 2003 Total				$8,475	

5 The FGDC is working the NSDI Framework Data Content Standards through the ANSI-accredited standards development organization **National Committee for Information Technology Standards (**NCITS) (www.ncits.org) and FGDC will endorse these standards once they endorsed by ANSI/NCITS. Note ANSI/NCITS schedule may require additional time.

FY02 (Dollars in thousands)

	NOAA	Census	DOT	USACE	NIMA	FEMA	EPA	USDA	NASA	USGS	BLM	FGDC	Total
1 –Standards Development	$435	$300	$1145	$275	$530	$380	$460	$300	$200	$550	$300	$1735	**$6610**
2 – Inventory Existing Data	$60	$30	$30	$30	$30	$30	$30	$30	$30	$90	$30	$10	**$430**
3 – Inventory Planned Data	$30	$15	$15	$15	$15	$15	$15	$15	$15	$45	$15	$5	**$215**
AGENCY TOTAL	**$525**	**$345**	**$1190**	**$320**	**$575**	**$425**	**$505**	**$345**	**$245**	**$685**	**$345**	**$1750**	**$7,255**
Department TOTAL	**$870**		**$1190**	**$895**		**$425**	**$505**	**$345**	**$245**	**$2780**			**$7,255**
	DOC		**DOT**	**DOD**		**FEMA**	**EPA**	**USDA**	**NASA**	**DOI**			

The following table shows a breakdown of the costs for fiscal year 2003 by task and agency.

FY03 (Dollars in thousands)

	NOAA	Census	DOT	USACE	NIMA	FEMA	EPA	USDA	NASA	BLM	USGS	FGDC	Total
1– Standards Development	$475	$350	$280	$330	$350	$325	$350	$350	$400	$350	$600	$215	**$4,375**
4 – Portal Design & Web Services	$240	$140	$140	$140	$140	$140	$140	$140	$140	$140	$340	$260	**$2,100**
5 – Portal Implementation	$180	$180	$180	$180	$180	$180	$180	$180	$180	$180	$180	$20	**$2,000**
AGENCY TOTAL	**$895**	**$670**	**$600**	**$650**	**$670**	**$645**	**$670**	**$670**	**$720**	**$670**	**$1,120**	**$495**	**$8,475**
Department TOTAL	**$1,565**		**$600**	**$1,320**		**$645**	**$670**	**$670**	**$720**	**$2,285**			**$8,475**
	DOC		**DOT**	**DOD**		**FEMA**	**EPA**	**USDA**	**NASA**	**DOI**			**$8,475**

Current/Proposed FY04 Baseline

FY04 Task Breakout

Phase/Milestone Description	FY04 Cost and Schedule Goals (Dollars in thousands)				
	Schedule		Duration		
	Start Date	End Date	Days	Planned Cost	Funding Agency
6 – Incentives for State, Local and Tribal Governments (Budget Request)	10/03	09/04	360	$1,500	FGDC
7 – Publicize and Implement Standards	10/03	09/04	360	$4,170	Fed Partners
8 – Portal Improvements / Expand use of Geospatial Architecture	10/03	09/04	360	$4,285	Fed Partners
FY 2004 Total				$9,955	

The following table shows a breakdown of the costs for fiscal year 2004 by task and agency.

FY04 Agency Funding (Dollars in thousands)

	NOAA	Census	DOT	USACE	NIMA	FEMA	EPA	USDA	NASA	BLM	USGS	FGDC	Total
6 – Incentives for State, Local and Tribal Governments (Budget Request)												$1,500	**$1,500**
7 – Publicize and Implement Standards	$450	$330	$300	$325	$330	$320	$330	$330	$320	$330	$565	$250	**$4,180**
8 – Portal Improvements / Expand use of Geospatial Architecture	$445	$340	$300	$325	$340	$325	$340	$340	$400	$340	$555	$225	**$4,275**
AGENCY TOTAL	**$895**	**$670**	**$600**	**$650**	**$670**	**$645**	**$670**	**$670**	**$720**	**$670**	**$1,120**	**$1,975**	**$9,955**
Department TOTAL	**$1,565**		**$600**	**$1,320**		**$645**	**$670**	**$670**	**$720**	**$3,765**			**$9,955**
	DOC		**DOT**	**DOD**		**FEMA**	**EPA**	**USDA**	**NASA**	**DOI**			**$9,955**

(Dollars in thousands)

*This money represents the portion of task 1g that has been identified as new money above and beyond redirected money for this task. For ease of budget this sum total of $1M per year could be allocated to the Project for redistribution.

**The Geospatial One-Stop assumes that Federal, field-level employees from the Federal Partner Agencies will be designated as liaisons corresponding with all involved parties. These liaisons will be designated on a state or multi-state basis. It is expected that each employee will spend approximately 50% of working time for the duration of the project.

FY02, FY03 and FY04 Overall Funding Summary – Current /Proposed Baseline

The following table represents a breakdown of the costs, by fiscal year, by agency costs. All funds identified within this table should be used to support the Geospatial One-Stop project. Each milestone is accomplished primarily through multi-agency in-kind FTE support from agency base funding. All agency in-kind efforts are expressed in the table in terms of FTE's staff efforts. The in-kind support to the Geospatial One-Stop project expressed in this table represent those activities above and beyond standard agency GIS/Mapping mission activities. Limited project cash funding is pooled into a Geospatial One-Stop account used to support all activities.

Geospatial One Stop Interagency Funding Estimates

Agency	FY02 Estimated In-kind FTEs	FY03 Estimated In-kind FTEs	FY04 Estimated In-kind FTEs	FY02 Estimated Cash	FY03 Estimated Cash	FY04 Estimated Cash	FY02 Estimated Total $	FY03 Estimated Total $	FY04 Estimated Total $
NOAA	3.25	6.95	6.95	$200	$200	$200	$525	$895	$895
Census	3.45	6.7	5.7			$100	$345	$670	$670
DOT	5	4	4	$690	$200	$200	$1,190	$600	$600
USACE	3.2	5.5	5.5		$100	$100	$320	$650	$650
NIMA	1	3.45	3.45	$475	$325	$325	$575	$670	$670
FEMA	3.25	5.45	5.45	$100	$100	$100	$425	$645	$645
EPA	1.85	5.1	5.1	$320	$160	$160	$505	$670	$670
USDA	2.55	5.35	5.35	$90	$135	$135	$345	$670	$670
NASA	2.45	5.2	5.2		$200	$200	$245	$720	$720
BLM	3.45	6.7	5.7			$100	$345	$670	$670
USGS	6.85	11.2	10.2			$100	$685	$1,120	$1,120
FGDC	2.5	2.5	2.5	$1,500	$245	$1,725	$1,750	$495	$1,975
Total	38.8	68.1	65.1	$3,375	$1,665	$3,445	$7,255	$8,475	$9,955

Definitions:
FTE = Full Time Employee or Equivalent
Dollars represent thousands
In-Kind: Contributions are expressed in FTEs required to support Geospatial One Stop activities above and beyond standard agency GIS/Mapping mission activities
Cash $ = Dollars transferred to FGDC Geospatial One Stop Project or for Contract Support for One Stop activities
Total $ = (FTE$100K) + Cash*

I.H.4 Actual performance and variance from OMB-approved baseline (original or current):

A. Show for each major project the milestones or events you planned (scheduled) to accomplish and the cost and what work was actually done and the cost. If this is a new project in the FY 2004 budget year, this section will be blank for your initial submission. OMB may ask for the latest information during the budget review process.

Accomplishment Summary:

- Approved ANSI Base Standard
- Intergovernmental Board of Directors Established
- Preliminary Standards Development Teams Established (consisting of approximately 500 participants)
- Contracts for User Requirements, Local Government Outreach, Modeling Support, Project Management Support, Project Outreach, Travel Support, Value Proposition and Financial Analysis Support, and Interoperable GIS Web Services in place.
- Project Management Team established

Comparison of OMB-Approved Baseline and Actual Outcome for Phase/Segment/Module of a Project									
Description of Milestone	OMB-Approved Baseline					Actual Outcome			
	Schedule			Planned Cost	Funding Agency	Schedule			
	Start Date	End Date	Duration (in days)			Start Date	End Date	Percent Complete	Actual Cost
Project Management			On Going						
Select Management Team	9/23/02	11/30/02	47			9/23/02	11/15/02	90%	NA
Overall Project Plan	9/27/02	10/31/02	40			9/27/02	11/15/02	90%	NA
Outreach Plan	9/23/02	10/31/02	47			9/23/02	11/30/02	90%	NA
Selection of Exec. Dir.		11/02					11/30/02	90%	NA
Redraft of Exhibit 300		12/02					11/30/02	98%	NA
Value Proposition Report (replaced Cost Benefit)	09/02	04/03	210	$250	FGDC	12/02			
1– Standards Development				$6,335	Fed Partners				
Requirements Analysis	06/02	08/02	60	$25	FGDC	08/02	11/26/02	100%	$25
Submit Proposal to ANSI	03/02	05/02	60			03/02	05/02	100%	

Comparison of OMB-Approved Baseline and Actual Outcome for Phase/Segment/Module of a Project									
Description of Milestone	OMB-Approved Baseline					Actual Outcome			
	Schedule			Planned Cost	Funding Agency	Schedule		Percent Complete	Actual Cost
	Start Date	End Date	Duration (in days)			Start Date	End Date		
ANSI Acceptance	05/02	05/02	30			03/02	05/02	100%	
Call for participation	05/02	08/02	60			05/02	10/02	98%	
Convene Standards Teams	08/02	08/02	30			09/02	10/02	100%	
Theme Schedules	9/20/02	9/26/02	7			9/02	9/26/02	100%	
Initial Draft	08/02	02/03	30			09/02		60%	
2 – Inventory Existing Data	04/02	02/03	120	$430	Fed Partners	04/02		80%	
3 – Inventory Planned Data	09/02	02/03	150	$215	Fed Partners	09/02		20%	
Guidance on Metadata Standard for documenting Agency plans	11/02	12/02	30			11/02		60%	
Documentation of Agency Plans using Metadata	10/02	02/03	150			12/02		20%	
FY 2002 Total				$7,255	Fed Partners				
Completion date: OMB-approved baseline: 9/02						Estimated completion date: 4/03			
Total cost: OMB-approved baseline: $7,255						Estimate at completion: $7,255			

B. Provide the following project summary information from your EVMS software: As of : (date)

B.1. Show the budgeted (planned) cost of work scheduled (BCWS): $ _____

B.2. Show budgeted (planned) cost of work performed (BCWP): $ _____

B.3. Show the actual cost of work performed (ACWP): $ _____

B.4. Provide a cost curve graph plotting BCWS, BCWP and ACWP on a monthly basis from inception of this phase or segment/module through the latest report. In addition, plot the ACWP curve to the estimated cost at completion (EAC) value, and provide the following EVMS variance analysis.

PROJECT SUMMARY (CUMULATIVE)	
	Value
Cost Variance = (BCWP-ACWP) =	
Cost Variance % = (CV/BCWP) x 100% =	
Cost Performance Index (CPI) = (BCWP/ACWP) =	
Schedule Variance = (BCWP-BCWS) =	
Schedule Variance % = (SV/BCWS) x 100% =	
Schedule Performance Index (SPI) = (BCWP/BCWS) =	
Two independent Estimates at Completion (EAC) = (ACWPcum + Performance Factor (PF) X(BAC B BCWPcum) where PF_1 = 1/CPI, and PF_2 = 1/CPI x SPI =	
Variance at Completion (VAC) = (BAC B EAC) for both EACs above =	
Variance at Completion % = (VAC/BAC) x 100% for both EACs above =	
Expected Funds to Completion (ETC) =	
Expected Completion Date =	

Definitions for Earned Value Management System:

ACWP – Actual Cost for Work Performed – What you paid.
BAC – Budget At Completion – The baseline (planned) budget for the project.
BCWP – Budgeted Cost for Work Performed – The earned value.
BCWS – Budgeted Cost for Work Scheduled – The planned costs.
CPI – Cost Performance Index – The ratio of the budgeted to actual cost of work performed.
CV – Cost Variance – The difference between planned and actual cost of work performed.
EAC – Estimate At Completion – The latest estimated cost at completion.
ETC – Estimate to Completion – Funds needed to complete the project.
PF – Performance Factor – The cost to earn a dollar of value, or ACWP/BCWP, or 1/CPI.
SPI – Schedule Performance Index – The percent of the project that has been completed.
SV – Schedule Variance – The variance between the actual and planned schedules.
VAC – Variance at Completion – The variance between the baseline and actual budget at completion.

C. If cost and/or schedule variance are a negative 10 percent or more, explain the reason(s) for the variance(s):

Delays in contract procurements impacted most of the milestones on the original baseline. Most contracts were not in place until the end of FY 2002 or the beginning of FY 2003. In addition, original baseline milestones were delayed to incorporate greater participation from State, Local and Tribal governments into the various modules of the project. All FY 2002 cash contributions were committed to contract support for the project for completion in FY03.

D. Provide performance variance. Explain whether, based on work accomplished to date, you still expect to achieve your performance goals. If not, explain the reasons for the variance.

Due to the delays in the procurement processes and the retirement of the original Executive Director, we are recommending to OMB that a new baseline be created and submitted for approval.

E. Discuss the contractor, government, and at least the two EAC index formulas in I.H.4.B, current estimates at completion. Explain the differences and the IPTs selected EAC for budgeting purposes.

F. Discuss the corrective actions that will be taken to correct the variances, the risk associated with the actions, and how close the planned actions will bring the project to the original baseline. Define proposed baseline changes, if necessary.

A Project Management Team, Portal Team, and the Standard Development teams are now in place and significant progress has been made within the last two months. All currently identified support contracts are also in place. The new structure and resources available to the project will significantly correct for past variance in the baseline. Currently we have the resources allocated to facilitate meeting the major milestones of standing up a 'Beta' version of the Portal and completing the Framework Data Content Standards through the ANSI review process in FY03.

G. Has the Agency Head concurred in the need to continue the program at the new baseline?
Yes__X__ No____

Part II: Additional Business Case Criteria for Information Technology

II.A. Enterprise Architecture

II.A.1 Business

A. Is this project identified in your agency's enterprise architecture? If not, why?

DOI is the managing partner for this Quicksilver project. By virtue of being a Quicksilver project it is in effect part of the federal governments enterprise architecture. Interior's enterprise architecture development effort has been accelerated. The Department's goal is to identify specific projects in the technical architecture. At this time, the Geospatial One-Stop initiative is included in the agency's Enterprise Architecture Common Requirements Vision, which depicts the business drivers, requirements, and strategies. This initiative will be integrated into the FEA under the Technical Reference Model by the planned integration of the Geospatial Interoperability Reference Model (GIRM) as delivered from the GAI, (a Working Group under the FGDC, Chaired by NASA). This has been agreed on by the Federal Enterprise Architecture (FEA) program office and the GOS Acting Executive Director. Also, the GOS Portal Manager will sit on the FEA Architecture Working Group.

B. Explain how this project conforms to your departmental (entire agency) enterprise architecture.

The Geospatial One-Stop project conforms well to the managing partner's architecture, as it is currently defined at the high level, and to the infrastructure direction the agency is taking. The current document released by the Architecture team, the Common Requirements Vision, addresses environmental trends, business strategies, business drivers, business information requirements, and requirements for technical architecture. Some of the embodied principles and strategies include:

- Utilize and implement e-Government;
- Provide "one-stop" for geospatial information and services through a web portal;
- Develop reusable, consistent, and sharable components; and
- Improve data management systems (e.g. policy and procedures relating to data standards, data privacy, data security, etc.).

Implementation of the Geospatial One-Stop project includes all of these DOI architecture strategies.

C. Identify the Lines of Business and Sub-Functions within the Federal Enterprise Architecture Business Reference Model that will be supported by this initiative.

Multiple Lines of Business requiring geospatial information will be supported by this initiative. Many studies reveal that about 80-90% of all government information has a geographic or spatial data component, meaning it can be tied to a specific place (for example: area code, latitude and longitude, street address, zip code). In 1998, the National Academy of Public Administration (NAPA) estimated that $3.56 trillion is spent annually in the economic sector of the U.S. economy where spatial data is of importance.

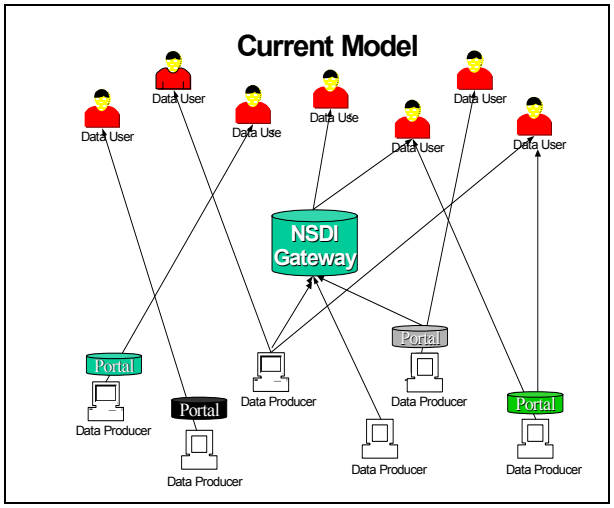
D. Briefly describe how this initiative supports the identified Lines of Business and Sub-Functions of the Federal Business Architecture.

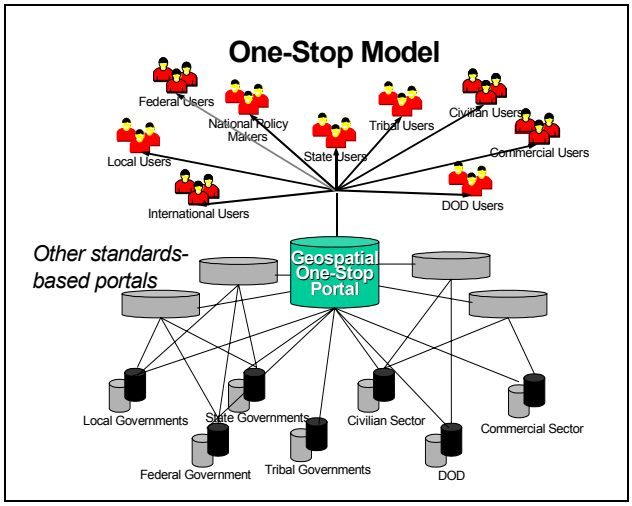
The Geospatial One-Stop project will support the integrated government-wide business architecture through the Technical Reference Model incorporating the GIRM.

E. Was this project approved through the EA Review committee at your agency?

This involves multiple agencies. GOS is in harmony with the overall FEA and particularly by incorporating the FEA at the Technical Reference Model level.

F. What are the major process simplification/reengineering/design projects that are required as part of this initiative?





The "Current" Model describes the present, stove-piped process of gathering and disseminating geospatial data. From this model, it is clear that there is a lack of integration among the producers and users of geospatial data. This model leads to duplication of effort and inefficient use of geospatial resources. It does not use the NSDI Clearinghouse network to its full extent. The "One-Stop" Model will simplify and unify access to geospatial data through the following five components:

1. Develop and implement data standards for seven thematic data layers of NSDI Framework Data.
2. Fulfill and maintain an operational inventory (based on standardized documentation, using FGDC Metadata Standard) of NSDI Framework Data initially from Federal agencies, ultimately from all levels of government, and publish the metadata records in the NSDI Clearinghouse network.
3. Publish metadata of planned acquisition and update activities for NSDI Framework Data, from Federal, State, local and tribal agencies in the NSDI Clearinghouse network, creating a virtual layer for data.
4. Prototype and deploy data access and web mapping services for NSDI Framework Data from Federal and non-federal agencies.
5. Establish a comprehensive portal to the resources described in the first four components (standards, priority data, planning information, and products and services).

G. What are the major organization restructuring, training, and change management projects that are required?

The Geospatial One-Stop project focuses largely on change management issues surrounding the NSDI, framework data standards, and cross-government coordination, while the Office of Management and Budget (OMB) Information Initiative (I-Team) addresses investment policies and activities that align resources to identify and implement efficient and effective business processes for the collection, maintenance, and distribution of geospatial data.

One of the most important change management activities related to Geospatial One-Stop is to ensure that all levels of government fully participate in the project. Another challenge is for Federal agencies to not view this project as a competition for resources, but rather as a collaborative effort that can be used to build upon the NSDI and Geospatial One-Stop and ultimately leverage and save resources. Additionally, the Project staff will simplify and unify change management processes associated with the Geospatial One-Stop project by:

- Collaborating with Federal, state, local, and tribal governments, and the private sector;
- Creating partnership requirements and opportunities;
- Enhancing project management and coordination processes;
- Facilitating cooperating groups; and
- Using the FGDC Cooperative Agreement Program and grants programs of other agencies.

Change management will be incorporated into the Geospatial One-Stop. Matters to be addressed include sources of resistance to change, altered work practices, change management roles, user commitment, work-force redirection, change monitoring, communications and mitigation responses. The primary goals of the plan are to:

- Collect and analyze information from key stakeholders on their change support requirements;
- Develop a stakeholder-endorsed change support vision; and
- Define initiatives and action steps for achieving the change support vision, including the recommended components, such as: training, collaboration tools, monitoring, and metrics.

The implementation of the Geospatial One-Stop will have a significant impact on the geospatial community and society more generally. It will help make government more cost-efficient and faster acting. A change management plan and campaign is vital to ensure all effected agencies understand the activities that are occurring, and are aware of how those changes will specifically impact and benefit them. Change management is an on-going process, not a one-time activity.

H. What are the Agency lines of business involved in this project?

All agency business lines involving a geospatial eGov component will be involved. Geospatial assets, such as interoperable standards, are being developed. We believe there are many business lines across multiple agencies that will associated with Geospatial One-Stop. Further work is needed to assess these numerous cross-agency lines of business that will be involved with this project. Business lines include those associated with but are not limited to: The National Mapping Program, the National Spatial Reference System, the National Geologic Mapping Program, the National Wetlands Inventory, the National Cooperative Soil Survey Program, the National Public Land Survey System, Geographic Coordinate Database, the National Oceanic and Atmospheric Administration (NOAA) nautical charting and nautical data collection and information programs, the U.S. Army Corps of Engineers (USACE) inland waterway charting program, the Offshore Minerals Program, the NASA's Earth Science Enterprise, FEMA's Flood Plain Mapping program and other federal activities that involve national surveying, mapping, remote sensing,

spatially referenced statistical data, and Global Positioning System (GPS).

I. What are the implications for the agency business architecture?

Geospatial One-Stop will facilitate the migration to a EGov business architecture to those business lines that require a geospatial component.

II.A.2 Data

A. What types of data will be used in this project?

Geospatial Data - Geospatial data identifies the geographic location and characteristics of natural or constructed features and boundaries on the Earth. Many studies reveal that about 80-90% of all government information has a geographic or spatial data component, meaning it can be tied to a specific place (for example: area code, latitude and longitude, street address, zip code). In 1998, the National Academy of Public Administration (NAPA) estimated that $3.56 trillion is spent annually in the economic sector of the U.S. economy where spatial data is of importance.

B. Does the data needed for this project already exist at the Federal, State, or Local level? If so, what are your plans to gain access to that data?

Today there is a wealth of geographic data available from Federal, state, county, local and tribal governments, academic institutions, and private sector organizations. Local governments often possess the most recent and highest resolution geographic data. While the Federal government collects large amounts of geographic information, it is estimated that state and local governments collect more than 90% of all geospatial information. Geospatial One-Stop would integrate Federal agency operations and information technology investments to make them more accessible to non-Federal agencies by facilitating widespread agreement on standards and models for geographic data, creating a web portal and interactive index to geospatial holdings at federal, state, local and tribal levels and encouraging greater coordination among all levels of government on existing and planned geospatial data collections

C. Are there legal reasons why this data cannot be transferred? If so, what are they and did you address them in the barriers and risk sections above?

No

D. If this initiative processes spatial data, identify planned investments for spatial data and demonstrate how the agency ensures compliance with the Federal Geographic Data Committee standards required by OMB Circular A–16.

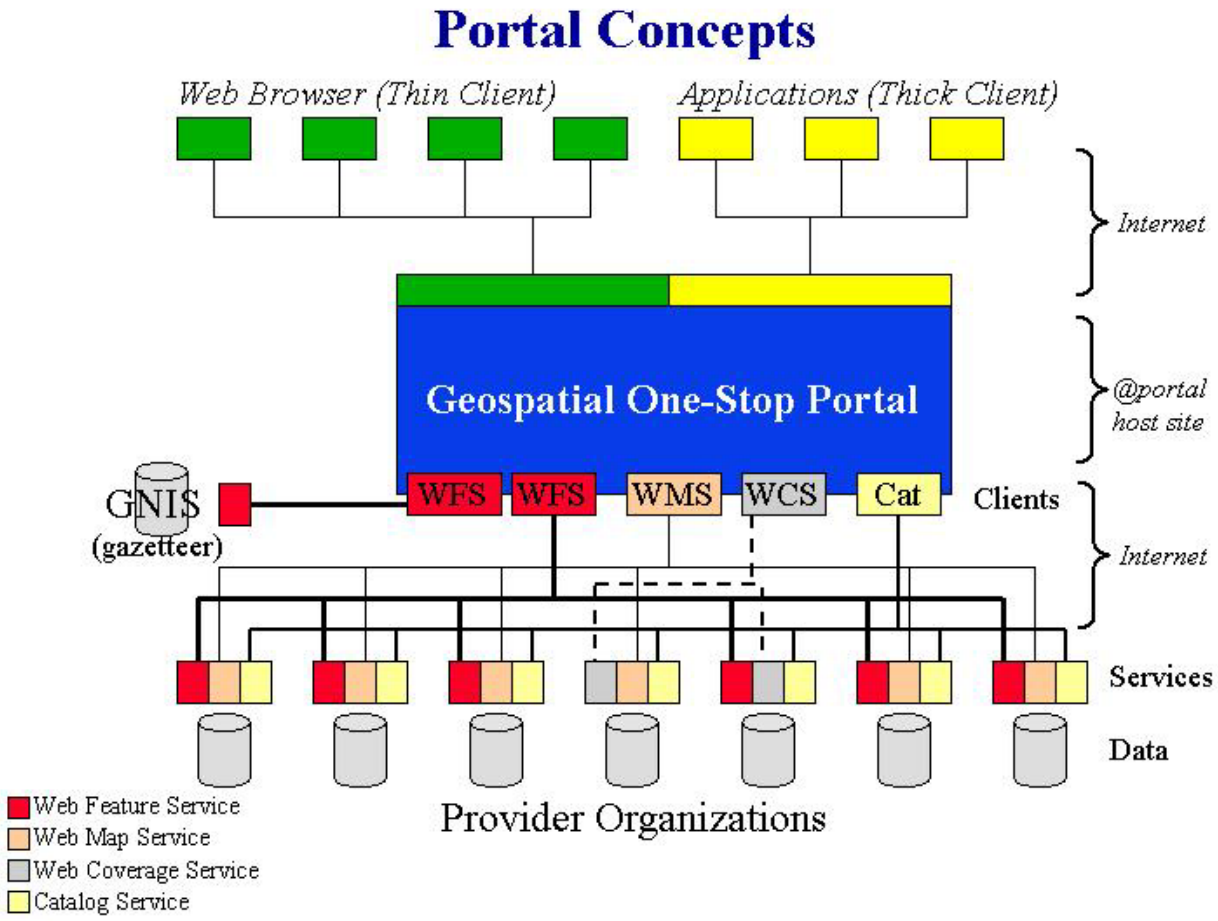
The Geospatial One-Stop project supports the overall plan of e-government and existing principles of the NSDI established in Executive Order 12906 and OMB Circular A-16, OMB Circular A-119, and Public law 104-113, the National Technology Transfer Advancement Act. Furthermore, it addresses long-standing OMB objectives to improve data quality, and reduce burden by maximizing the benefits of technology.

II.A.3 Application and Technology

A. Discuss this initiative/project in relationship to the application and technology layers of the EA.

Include a discussion of hardware, applications, infrastructure, etc.

The Geospatial One-Stop Project works with the Federal Enterprise Architecture (FEA) Program Management Office to align Geospatial Activities within FEA via the Solutions Architects Working Group that is established for E-government initiative. The activities of Geospatial One-Stop align conceptually with the Data Reference Model and Technical Reference Model that are part of the FEA Business Reference Model. Discussions with FEAPMO have begun and will continue to see how the Geospatial Interoperability Reference Model can be incorporated into the government wide EA.



Geospatial One-Stop supports Component Based Architecture. For example, the Project is engaging the Open GIS consortium that develops interoperable software interface specifications that support the sharing of geospatial data across multiple systems. To supply content for these interface specifications the project is working with the ANSI International Committee for Information Technology Standards, Technical Committee L1, to develop standards for framework data. These standards based components become the spatial data infrastructure of the Geospatial One-Stop portal able to support many applications across different hardware and software systems.

B. Are all of the hardware, applications, and infrastructure requirements for this project included in the EA Technical Reference Model? If not, please explain.

It is anticipated that this project will develop geospatial contributions to the Technical Reference Model. The FGDC GAI Working Group is developing a Geospatial Interoperability Reference Model. This model combined with the activities of Geospatial One-Stop will form the basis of enhancements to the reference model and will provide government wide guidance on geospatial architecture.

II.B. Security and Privacy

NOTE: Each category below must be addressed at the project (system/application) level, not at a program or agency level. Referring to security plans or other documents is not an acceptable response.

II.B.1. How is security provided and funded for this project (e.g., by program office or by the CIO through the general support system/network)?

We have identified Donald Watson as the acting lead for the GOS IT Security Plan. Our security plan will address security requirements across our interagency effort. Each Federal, state, tribal and local government agency will be responsible for ensuring that data within the Geospatial One-Stop conforms to that agency's security plan. GOS, in concert with OMB, and DOI will be responsible for providing an overall security policy and guidance, as necessary. This Security Plan will comply with the NIST 'Best Practices' http://cs-www.ncsl.nist.gov/fasp .

A. What is the total dollar amount allocated to security for this project in FY 2004?

The project office will fund the security measures needed for FY 20004. Approximately $200,000 (or 10%) of the FY2004 interagency funding has been allocated from Modules 4&5, the Portal Design's budget to address security needs. More detailed Security funding requirements will be developed as part of the costs identified through the life cycle model.

II.B.2 Does the project (system/application) meet the following security requirements of the Government Information Security Reform Act, OMB policy, and NIST guidance?

A. Does the project (system/application) have an up-to-date security plan that meets the requirements of OMB policy and NIST guidance? What is the date of the plan?

The Portal development activity has been initiated in FY03 and a detailed security plan will be developed in concert with that effort. The Managing Partner and the Portfolio Manager will evaluate the need for incorporating a full security plan with OMB in FY03.

B. Has the project undergone an approved certification and accreditation process? Specify the C&A methodology used (e.g., NIST guidance) and the date of the last review.

This will occur after the deployment of the Beta Version of the 1-Stop Portal that is scheduled for May 23, 2003.

C. Have the management, operational, and technical security controls been tested for effectiveness? When were most recent tests performed?

These procedures will be tested during the development of the Beta Version of the 1-Stop Portal that is scheduled for deployment in May 23, 2003.

D. Have all system users been appropriately trained in the past year, including rules of behavior and consequences for violating the rules?

NA. There are currently no system users at this time. However all Federal Partner Agencies employees, including contract staff, are required to complete a security training class each year which includes the rules of behavior and consequences for violating the rules.

E. How has incident-handling capability been incorporated into the system, including intrusion detection monitoring and audit log reviews? Are incidents reported to GSA's FedCIRC?

This monitoring will be performed by host site for the Geospatial One-Stop Portal. The host site has not been determined at this time. However, after selection of the host site and the deployment of the Beta Version of the 1-Stop Portal (scheduled for May 23, 2003) any incidents will be reported to GSA's FedCIRC.

F. Is the system operated by contractors either on-site or at a contractor facility? If yes, does any such contract include specific security requirements required by law and policy? How are contractor security procedures monitored, verified, and validated by the agency?"

The system is currently not operated by contractors. However, in the future any contactors associated with the project will be required to be trained in and use the same security measures as the Federal Partner employees. All Federal Partner Agency employees, including contract staff, are required to complete a security training class each year, which includes the rules of behavior and consequences for violating the rules.

II.B.3 How does the agency ensure the effective use of security controls and authentication tools to protect privacy for those systems that promote or permit public access?

FGDC Federal Partner members have adopted a privacy policy for geospatial data that is based upon existing public law and policy. FGDC Policy on Access to Public Information and the Protection of Personal Information Privacy in Federal Geospatial Databases, dated April 1998, outlines this policy (http://www.fgdc.gov/fgdc/policies/privacypolicy.pdf). Additionally, a Privacy Impact Assessment process is planned.

The Geospatial One-Stop project will use security controls and authentication tools to protect privacy. Its security controls conform to the NSDI, which was established under and aligned with various public law and policy provisions. The NSDI has been developing over the past seven years, enhancing the ability of geospatial users and providers to collect, share and use geographic information more effectively, efficiently, and securely. The metadata and other elements of the NSDI enhance the administration and implementation of privacy concern processes for enterprises that depend on authentic and timely spatial data support.

All transaction databases will not be accessible by the public and will be protected behind the host sites firewall. The public will have read only access. No personal information will be included in the GOS Portal. All of the data is public data.

II.B.4 How does the agency ensure that the handling of personal information is consistent with relevant government-wide and agency policies?

See Section II.B.3

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II.B.5 If a Privacy Impact Assessment was conducted, please provide a copy to OMB.

A Privacy Impact Assessment was not conducted since the GOS Portal will only contain public data. Following deployment, an Official Agency Record Designation document will be available.

II.C. Government Paperwork Elimination Act (GPEA)

II.C.1 If this project supports electronic transactions or record keeping that is covered by GPEA, briefly describe the transaction or record-keeping functions and how this investment relates to your agency's GPEA plan.

Each effected agency will be responsible for determining whether its GPEA Plan covers electronic transactions and record keeping functions. Where agencies are not in compliance, the GPEA Plan will be updated. The current status of each agency's GPEA Plan is unknown as it relates to geospatial data.

One the basis of the NARA Electronic Records Management (ERM) e-government initiative, and after mutual review of each respective business case, it was determined that collaboration between NARA's ERM and DOI's Geospatial One-Stop initiative will be pursued.

II.C.2 What is the date of your GPEA plan?

A detailed GEPA plan does not currently exist. The Managing Partner and the Portfolio Manager will evaluate the need for incorporating a full GPEA plan in FY03.

II.C.3 Identify any OMB Paperwork Reduction Act (PRA) control numbers from information collections that are tied to this investment.

After the Geospatial One-Stop project has been approved, each effected agency will identify all OMB Paperwork Reduction Act control numbers from information collections that are tied to the Geospatial One-Stop.